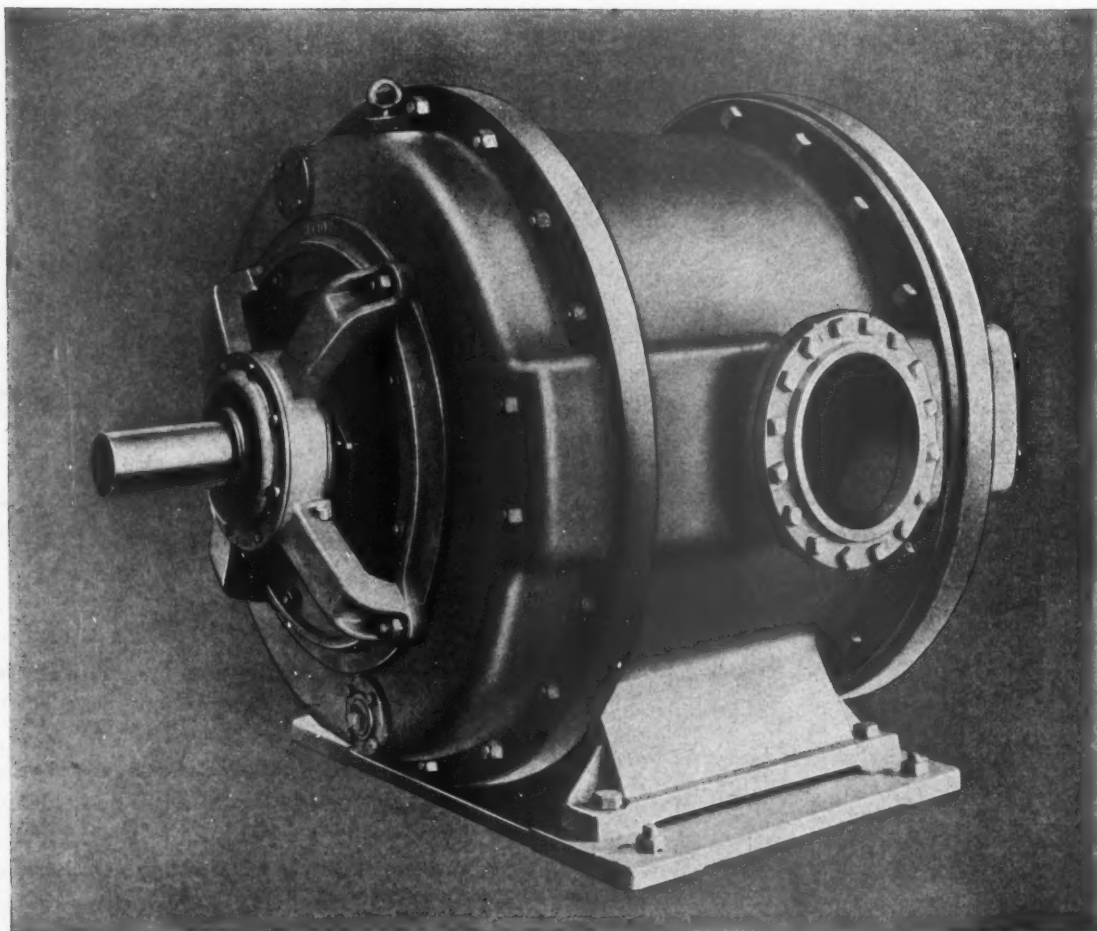




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Crown Zellerbach, Rayonier Announce Executive Changes

Fernandina Operating Men Named

● Early in February the interest of the pulp and paper industry on the Pacific Coast was centered upon the announcements of promotions and transfers by the Crown Zellerbach Corporation and Rayonier Incorporated. Included were the naming of the superintendent and plant engineer for the Fernandina Pulp & Paper Company's bleached sulphite dissolving pulp mill now under construction at Fernandina, Florida.

The unexpected and unfortunate death on January 13th of George P. Berkey, vice-president of the Crown Zellerbach Corporation with headquarters in Portland, Oregon, has brought a reassignment of duties to Albert Bankus, vice-president and Frank N. Youngman, assistant vice-president of the Crown Zellerbach Corporation.

The official announcement from the corporation's San Francisco headquarters stated:

● "All matters pertaining to mill operations formerly handled by Mr. Berkey will be handled by vice-president Albert Bankus, whose headquarters will continue in San Francisco.

"All other matters pertaining to

company affairs at Portland will be handled by Assistant Vice-President F. N. Youngman, who is resident at Portland."

The other announcement made by D. J. Goldsmith, secretary of the Crown Zellerbach Corporation in San Francisco stated:

● "Mr. Ray Dupuis has been appointed Resident Manager of the Washington Pulp & Paper Corporation Division of Crown Zellerbach Corporation, succeeding Mr. Norman B. Gibbs, who will in the future devote his entire time to the affairs of Rayonier Incorporated.

"We also take this occasion to make belated announcement of the appointment of Mr. Paul F. Middlebrook as Resident Manager of the Crown Willamette Paper Company Division, Lebanon, Oregon, succeeding Mr. Dan Dupuis, resigned."

Tommy Hargreaves has been appointed resident engineer at the Washington Pulp & Paper Corporation, Division of Crown Zellerbach Corporation in Port Angeles.

Rayonier Changes

● It has been announced by Rayonier Incorporated that Arthur W.



ALBERT BANKUS,
Vice-President
Crown Zellerbach Corporation



FRANK N. YOUNGMAN,
Assistant Vice-President, Crown
Zellerbach Corporation, Portland

Berggren has been appointed manager of the corporation's bleached sulphite pulp mill at Port Angeles (formerly the Olympic Forest Products Company). Mr. Berggren has been manager of the Shaffer Pulp Company at Tacoma, Washington.

Norman B. Gibbs, who has been resident manager of both Rayonier Incorporated and the Washington Pulp & Paper Corporation mill at Port Angeles, will in the future devote his entire time to supervising operations at the Rayonier Incorporated mills at both Port Angeles and Shelton, Washington.

David B. Davies, who has been general manager of Rayonier Incorporated at Shelton since the mill was constructed in 1927 is to supervise pulp quality at all plants of Rayonier Incorporated at Shelton, Port Angeles, Grays Harbor and the corporation's wholly owned subsidiaries, the Shaffer Pulp Company in Tacoma and the Fernandina Pulp & Paper Company at Fernandina, Florida, now under construction, but which will be ready for operation around midyear.

Fernandina Appointments

● E. J. McGill of the Grays Harbor Division of Rayonier Incorporated has been appointed superintendent of the Fernandina Pulp & Paper Company new bleached sulphite pulp mill.

Oliver Ashford of the engineering department of Rayonier Incorporated, Shelton Division, has been appointed resident engineer at Fernandina.



ARTHUR W. BERGGREN,
Manager Rayonier Incorporated
at Port Angeles

C. S. Carr of the National Paper Products Division of Crown Zellerbach Corporation at Port Townsend is to be steam engineer at Fernandina.

A. Gustin, sulphite superintendent of Rayonier Incorporated, Grays Harbor Division will go to Fernandina temporarily to assist in putting the mill into production. William McKenzie and Pat Cannon, Rayonier engineers at Port Angeles, will also go to Fernandina temporarily to assist in starting the mill.

Coast Men To Give Papers at New York Meeting

● Three Pacific Coast men are scheduled to present papers before the annual winter meeting of TAPPI at the hotel Waldorf-Astoria February 21-25th.

R. B. Wolf, manager of the Pulp Division, Weyerhaeuser Timber Company, will talk before the general session Monday, February 21st, on "Economic and Technical Aspects of Wood Pulp as a World Commodity."

At the same session Dr. Edwin C. Jahn of the Department of Forestry, University of Idaho, will offer his paper on, "Degree of Gelatinization of Wood."

Tuesday morning, February 22nd, Brian Shera of the Pennsylvania Salt Manufacturing Company of Washington, Tacoma, will present a paper prepared by himself, George E. Schmidt of Tacoma and T. W. Toovey of the company's Philadelphia office on, "Causic Soda in the Refining of Wood Pulp."

Wednesday afternoon at 3:30 the Weyerhaeuser Timber Company will present its new sound moving picture, "Trees and Men," in the Astor Gallery of the Waldorf-Astoria. This is a most interesting and instructive picture.

Ocean Falls Men To Tasmania

● Several former members of the Pacific Mills, Ltd., staff at Ocean Falls, B.C., have gone to Tasmania to assist in organization of the Derwent Valley Pulp Company's mill.

They are: Frank Christie, G. S. Hayden, C. Jeffreys and H. K. Richardson.

All four are expert paper makers, and they will probably form the nucleus of the technical staff to teach Australians how to make newsprint.

Percy Sandwell, well known British Columbia consulting engineer, who has been engaged to design the mill, is now in Europe buying equipment. He will return to the Pacific Coast in a few weeks and plans to go to Australia to take over his new job late in March.

Riches Named Manager of Western Paper Converting

● Lloyd Riches, who has recently again assumed the general managership of the Western Paper Converting Company at Salem, Oregon, has had a wide experience in the paper business of the West, and is well known to paper buyers throughout this territory.

For the past five years he has been Northwest sales representative for the Hawley Pulp & Paper Company, working out of Oregon City. For two years prior to that, following his resignation from the Western Paper Converting Company in May, 1931, he was in charge of the Hawley sales office in San Francisco.

Mr. Riches was one of the original incorporators of the Salem company in 1925, and acted as sales manager there until December, 1929, when he became plant manager. During the time while he was away from Western Paper Converting Company, he was still associated as a stockholder and as a member of the board of directors most of that time.

A. B. Galloway, who passed away last June, was the former general manager for the company. After his death, Hays Rehm, plant manager, was in charge. He continues with the company in a sales capacity, with headquarters in Seattle.

The Western Paper Converting Company manufactures a wide line of products, and finds a market throughout the West and on the Atlantic Coast. Among

its products are school papers, tablets, note books, candy bags, meat wraps, and similar specialty items.



LLOYD RICHES,
General Manager, Western
Paper Converting Company

Camas Dinner Meeting Draws Record Crowd

● Technical men of the industry, 125 strong, met at Camas, Washington, February 8th for the monthly dinner meeting of TAPPI.

In the absence of George McGregor, chairman of the Pacific Section, who was on a trip at the time, first vice-chairman N. W. Coster presided over the gathering in the new Camas school restaurant building. With him at the head table were Carl Fahlstrom, G. S. Brazeau, A. G. Natwick, Frederick M. Pape, J. V. B. Cox, secretary of the Pacific Section, Dr. E. C. Lathrop, W. Norman Kelly, R. A. Wertheimer and Roderic Olzendam. Mr. Wertheimer and Mr. Fahlstrom are past chairmen of the Pacific Section of TAPPI.

Following the dinner Mr. Coster expressed the sentiments of the group in appreciation of the assistance of Mrs. W. J. Van Arnam in helping W. R. Barber arrange the meeting. Mrs. Van Arnam, secretary to Mr. Barber, who is technical supervisor of the Camas mill, took charge of the details of the dinner when Mr. Barber was called out of town on company business.

F. M. Pape of the Wilson and Geo. Meyer Company presented a motion picture showing operations of the American Potash & Chemical Corporation at Trona, California. Three reels described the trip from Los Angeles to Trona, on the shores of Searles Lake, features of life in the well equipped desert community, and the plant in which the company produces large quantities of potash, borax, salt cake and soda ash.

● A. R. Heron, assistant to the operating committee of the Crown Zellerbach Corporation, scheduled as the principal speaker of the evening, was delayed by a washout enroute by train from San Francisco, so was unable to be present. Fortunately, Roderic Olzendam of the Weyerhaeuser Timber Company's headquarters office in Tacoma, was present and gave an interesting talk to the TAPPI members on "Human Relations."

"Our mechanical engineering, our chemical engineering, our electrical engineering is marvelous," Mr. Olzendam said. "Where we have fallen down is in our human engineering. We should hold conferences on human nature as well as on tariffs, politics and the like. I don't know what you can be scientific about relations between men, but we must stop saying two times two is six, as far as human relations are concerned."

Mr. Olzendam also discussed the development of group insurance and social security, and pointed out that the fundamental problems of steady employment and security have not yet been solved, but must be faced and solution gradually evolved. There is a real need, he said, for intelligent leadership of the 90 per cent of sensible, hard-working citizens and for the strengthening of their positions so that they will spurn unsound doctrines.

The next dinner meeting of TAPPI will be held in Tacoma on March 10th, at the College of Puget Sound.

The following attended the dinner meeting of the Pacific Section of TAPPI at Camas, Washington, February 8th:

C. E. Ackley, Hawley Pulp & Paper Company, Oregon City; Floyd Aslin, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; Niles M. Anderson, St. Regis Kraft Company, Tacoma; John Ashby, Westminster Paper Company, New Westminster, B. C.; G. S. Brazeau, Pulp Division, Weyerhaeuser Timber Co., Everett; E. B. Beideman, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas.

Chas. H. Belvin, Chromium Corp. of America, Portland; Robert A. Bremner, Electric Steel Foundry Co., Portland; J. E. Brokaw, Crown Zellerbach Corp., San Francisco; Ella F. Brokaw, San Francisco; J. E. Brown, Pacific Pulp & Paper Industry, Portland; R. S. Carey, National Aniline & Chemical Co., Portland.

A. C. Catto, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; G. W. Chartes, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; W. W. Clarke, Longview Fibre Company, Longview; Elton B. Clarke, Monarch Forge & Machine Works, Portland; George H. Clark, Air Reduction Sales Co., Portland; Mrs. George H. Clark, Portland.

E. W. G. Cooper, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; N. W. Coster, Soundview Pulp Co., Everett; J. V. B. Cox, Hercules Powder Company, Portland; J. LeRoy Crane, Crown Zellerbach Corporation, San Francisco; Roscoe Deublenitz, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; R. E. Drane, St. Helens Pulp & Paper Co., St. Helens; Alec Duncan, Hercules Powder Company, Portland; C. W. Duncan, Crown Zellerbach Corporation, San Francisco; H. T. Emsley, Tennessee Eastman Corporation, Kingsport, Tennessee; Carl Fahlstrom, Longview Fibre Company, Longview; Lyle G. Fear, Westinghouse Electric & Mfg. Co., Portland; Francis W. Flynn, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas.

Dr. Leo Friedman, Oregon State College, Corvallis; Harry Fromong, Hawley Pulp & Paper Company, Oregon City; Robert J. Fuller, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; V. C. Gault, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; H. Gevers, Longview Fibre Company, Longview; William R. Gibson, Northwest Filter Company, Seattle.

Harry W. Glenn, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; W. G. Goodwin, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; T. H. Grant, Columbia River Paper Mills, Vancouver, Wash.; Reginald B. Haight, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; John E. Hassler, Coast Mfg. & Sales Company, Portland; J. E. Hanny, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; H. F. Hoehne, Longview Fibre Company, Longview.

George W. Houk, Hooker Electrochemical Co., Tacoma; W. F. Hynes, General Electric Company, Portland; A. M. Isaacs, Crown Zellerbach Corp., Portland; W. C. Jacoby, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; Clarence Johnson, Oregon State College, Corvallis.

L. T. Johnson, Hawley Pulp & Paper Co., Oregon City; G. M. Julien, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; Herman Junge, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; William M. Kahn, Oregon State College, Corvallis; W. A. Kaye, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; W. Norman Kelly, Pulp Division, Weyerhaeuser Timber Co., Longview.

B. L. Kerns, Westinghouse Elec. & Mfg. Co., Seattle; E. E. Kertz, John W. Bolton & Sons Co., Portland; C. M. Koplin, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; Dr. E. C. Lathrop, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; Clyde E. Laver, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; J. G. Long, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas.

L. D. McGlothlin, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; C. J. McAllister, Coast Mfg. & Sales Co., Portland; H. C. Macauley, Longview Fibre Company, Longview; R. V. Maier, General Electric Company, Portland; C. O. Malnberg, Hercules Powder Company, Portland; M. L. Mammen, Crown Zellerbach Corp., Portland.

Wm. C. Marshall, Heller & Metz Corp., Portland; Robert W. Martig, Control Equipment Co., Portland; A. M. Mears, Pacific Coast Supply Co., Portland; J. J. Melody, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; Ned Menzies, W. S. Tyler Company, Seattle; H. Norman Miller, Westinghouse Elec. & Mfg. Co., Portland.

R. L. Miller, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; R. G. Misphey, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; C. W. Morden, Morden Machines, Portland; R. E. Moisant, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; A. G. Natwick, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; K. R. Newman, Oregon State College, Corvallis.

Fred Nicholson, Stetson-Ross Machine Company, Seattle; S. Norman, General Iron & Steel Works, Portland; M. Norwood, Columbia River Paper Mills, Vancouver, Wash.; E. H. Nunn, Western Waxed Paper Co., Camas; H. D. Olds, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; F. A. Olmsted, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas.

Roderic Olzendam, Weyerhaeuser Timber Company, Tacoma; C. J. Page, Longview Fibre Company, Longview; Frederic M. Pape, Wilson & Geo. Meyer & Co., Seattle; Earl Paul, Crown Zellerbach Corp., Portland; Thomas Parks, Columbia River Paper Mills, Vancouver, Wash.; R. T. Petrie, Bagley & Sewall Co., Portland.

(Continued on page 33)

Tacoma Meeting March 10th

The next Dinner Meeting of the Pacific Section of TAPPI will be held THURSDAY EVENING, MARCH 10th, at the COLLEGE OF PUGET SOUND, 1500 North Warner, Tacoma, Washington, at 6:30 p. m.

Features will be a showing of the new Weyerhaeuser Timber Company sound moving picture, "TREES AND MEN," and a tour of the Department of Chemistry laboratories where special exhibits will be shown in connection with the FIFTIETH ANNIVERSARY celebration of the College of Puget Sound.

RESERVATIONS should be sent to WILLIAM T. WEBSTER, General Superintendent of the St. Regis Kraft Company, Tacoma, who is chairman of the meeting.

"Milk Bottles From Washington Trees"

Is the slogan of the Gold Star Creameries of Everett, Washington—The first dairy to adopt paper milk containers made of Pacific Coast bleached sulphite board produced by Fibreboard Products, Incorporated, at Port Angeles, Washington

ON February 10th, with the starting of production of Sealed-Pure Milk in its Everett, Washington, plant, the Gold Star Creameries, Incorporated of Washington, became the first Pacific Coast dairy to market milk and cream exclusively in paper containers.

The new organization's slogan, "Milk Bottles from Washington Trees," is literally true for the Gold Star containers are of pure bleached sulphite board made by the Fibreboard Products Incorporated plant at Port Angeles, Washington. But if the new Everett dairy's paper packaged milk proves as popular with the consuming public in Western Washington as it has been where introduced in the Middle West and East, the paper milk container will be rapidly adopted by dairies over the entire Pacific Coast, and the slogan will become "Milk Bottles from Pacific Coast Trees."

The Gold Star Creameries, Incorporated, was organized in 1934 with J. A. Zinn as president. D. B. Malkson is treasurer with Harry Kemp as secretary. Mr. Kemp is also vice-president of the Kemp-Booth Company, distributors of woollens. Included among the company's stockholders are Alfred Shemanski, a former dairy operator, a prominent Pacific Northwest business man and a member of the Board of Regents of the University of Washington; and Herbert Schroeder, traffic manager of the Washington Co-operative Egg and Poultry Association.

A modern, one-story dairy building was erected at Everett and equipped with the latest in dairy machinery for the sanitary and economical packaging of milk.

● Even before the company was organized Mr. Zinn was convinced of the practicability of putting milk up in paper containers and he personally studied the several paper containers in daily use by dairies in other parts of the country. The result of his investigations was the selection by the Gold Star Creameries of the Excello Pure-Pak container.

The Pure-Pak machine was purchased and its installation completed in January of this year in the Everett dairy plant. It is the first Pure-Pak machine on the Pacific Coast although twenty-two are in daily operation in Middle Western and Eastern dairies, and ten more are on order and in the course of construction.

The Excello method differs fundamentally from other paper container systems for milk, in that the container is formed and paraffined at the dairy in the filling machine a few seconds before

filling. Other paper containers are formed at the factory, sealed and shipped to the dairy where they are opened and filled.

After the Gold Star Creameries had selected the Excello Pure-Pak container machine, which is manufactured by the excello Corporation of Detroit, Michigan, the Pure-Pak Division of Excello began an investigation of possible Pacific Coast sources of the high quality 100 per cent bleached sulphite .016 board necessary for the Pure-Pak containers.

● It was essential that a Pacific Coast source of milk container board be provided before the Gold Star Creameries could begin operations. To ship board from the Middle West or the Atlantic Coast would be too expensive and besides was unnecessary as mills on the West Coast could produce a board to Excello's specifications.

Through research and practical experience Excello had worked out definite specifications for the milk container board and in order to maintain the high quality of Pure-Pak containers, closely supervises manufacture of the board. In addition to the usual specifications for a stiff, strong board another was added, that of sterility. The Pure-Pak board must be as nearly sterile as possible which involves problems of paper mill production.

Fibreboard Selected

● It was determined by Excello's investigation that the paper and board mill of Fibreboard Products Incorporated at Port Angeles, Washington, was in an excellent position to produce a strong, sterile board. Subsequently, Fibreboard agreed to produce the milk container board for the Excello Corporation according to Excello's specifications. The bleached sulphite pulp from which the board is made is produced in a Washington pulp mill.

Three other American manufacturers are producing milk container board for the Excello Corporation at present, the Detroit Sulphite Pulp & Paper Company of Detroit, the Stevens & Thompson Paper Company of North Hoosick, New York and the Cherry River Paper Company of Richwood, West Virginia.

Advantages of Single Service Containers

● The single service paper milk container offers a number of advantages to consumer, to dealer and to the dairy. The consumer is probably more conscious of the advantage of light weight of the paper container than he is of its highly important sanitary advantages. The trend in milk distribution especially in the large cities of the East and Middle West

The Perfect Container for Dairy Products

1. Your single service container
2. Enters only YOUR home
3. Pouring lip sealed inside
4. No bother to wash and return
5. Saves refrigerator space
6. No danger from broken fragments
7. Guaranteed clean and sterile
8. Keeps contents fresh longer
9. Protects your family's health

is toward the sale of milk by grocery stores and away from home delivery. The expense of home delivery is a major item and in many cities the reduction in delivery cost when sold through stores is passed on to the consumer in the form of a lower price, thus further increasing store sales.

When milk is sold through stores the advantages of the single service paper container are even greater than in the case of home delivery. Neither the store nor the dairy has to bother with the return of bottles and its consequent annoying and expensive bookkeeping. The milk takes up less space in the store's refrigerator. It will keep longer according to the tests of the paper container manufacturers.

The customer buying milk does not have to bring in a bottle or if she has none is not asked to make a deposit. Then there is the highly important item of weight. The paper container is light in weight, easier to carry home. If placed in an automobile there is no spilling if it falls on its side.

● In the customer's home the paper container's smaller size again proves an advantage, taking up less space in the buyer's refrigerator. When the milk is consumed the container is easily disposed of. The unsightly collection of empty bottles waiting to be returned is eliminated.

The percentage of store sales of milk is said to be increasing steadily on the Pacific Coast. In the city of Seattle, for example, approximately 50 per cent of all milk sold is sold through stores and restaurants.

In addition to these advantages of light weight and non-return the paper container offers outstanding sanitary protection. Your container has never been in any other home or restaurant. It has never been used for any other purpose. It is made of pure wood pulp, never before used. It has been processed to be as sterile as it is possible to make it. In the Pure-Pak container the inside and outside coating of sterile paraffin was put on at 180 degrees Fahrenheit and just a few seconds before the milk was injected. It was sealed immediately with an airtight and tamper proof seal.

When you open the paper container you will find the pouring lip inside where it had been protected from contamination.

Advantages to the Dairy

● The Excello Corporation emphasizes the following advantages of Pure-Pak containers to the dairy.

First is Public Acceptance. Experience shows that the consuming public is quick to appreciate the sanitary advantages and the convenience of the paper milk

container. The second is Guaranteed Sterility of the containers and the filling and sealing processes. The third is Greater Economy in dairy operation.

Fourth is Lower Distribution Costs. Twelve quarts of milk in Pure-Pak containers packed in a fibre container weighs 28.5 pounds and occupies 1,053 cubic inches of space. On the other hand twelve quarts of milk in glass bottles in a wooden crate weighs 64 pounds (225 per cent heavier without including the ice necessary with glass but not necessary with Pure-Paks) and occupies 3,168 cubic inches of space or 300 per cent more.

The dairy also benefits by the elimination of the expense and bother of deposits on bottles in retail stores and of the wholesale collection of bottles from the same stores. Easier and quicker handling of the Pure-Pak milk is another big advantage. It is claimed that no cracked ice is necessary when milk is put up in Pure-Paks.

Truck maintenance costs are said to be reduced because there is no dripping water to rust chassis and metal parts of body or to rot wooden body parts.

Smaller, lighter delivery trucks can be employed, carrying a greater payload in proportion to their weight, lowering the unit cost of delivery.

Sanitation During Manufacture

● Through its supervision of the manufacture of bleached sulphite pulp used in making the Pure-Pak milk container, the Excello Corporation closely guards the board against contamination.

Examination of sulphite pulp immediately upon being blown from the digesters show it to be entirely sterile. With this perfect start each step in the board making process is protected. Water is filtered and chemically sterilized. The size is tested periodically to keep it sterile. The mill piping system is kept pure with chlorine or chloramine.

The sterile board coming from the reel is carefully wrapped for shipment to the carton plant. Here the various steps in die cutting the several sizes of containers, glueing the side seams and packing for shipment to the dairy are performed under the best possible sanitary conditions. A pure, sterile vegetable glue is used for glueing the sides together. The cut and glued containers are packed flat (see photograph) in wax paper lined fibre containers which are sealed tight. These are not opened until they are to be placed in the Excello Pure-Pak forming, filling and sealing machine.

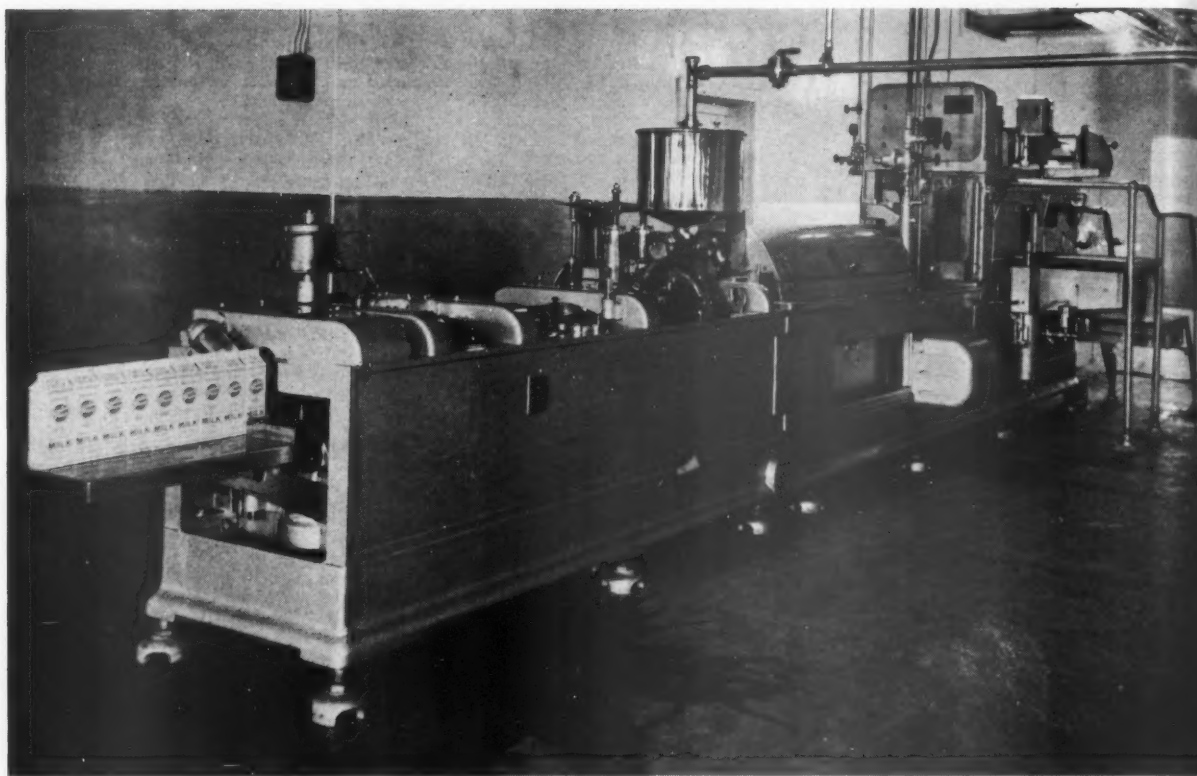
Excello Method

● The Excello Pure-Pak machine that is operating in the Gold Star Creameries at Everett, Washington, is a completely integrated machine.

An operator takes the sterile flat containers from the sealed carton and places them in the machine. They are first opened automatically, the bottom flaps folded over and glued with a sterile vegetable glue. The machine then dips the formed container into sterile



The MODERN SANITARY WAY of packaging milk is in single service paper containers >>> Here are the three sizes, quart, pint and half-pint, all 2 3/4 inches square, and an unwaxed collapsed container ready for the Pure-Pak forming, waxing, filling and sealing machine >>> The 100% bleached sulphite .016 board of which the Pure-Pak containers are made was manufactured by Fibreboard Products, Incorporated, at Port Angeles, Washington.



The GOLD STAR CREAMERIES PURE-PAK machine at Everett, Washington >>> The collapsed containers shown on the opposite page are fed into the machine at the right >>> They are formed, the bottom glued with a sterile glue, dipped into sterile paraffin at 180 degrees Fahrenheit and uniformly coated inside and out >>> After cooling to 39 degrees they are automatically filled, hot sealed, stamped with the date and the top stapled with a hot tinned wire making the package tamper proof >>> The Pure-Pak containers at the left are ready for shipment to stores and restaurants.

paraffin at 180-degrees Fahrenheit where they remain for 18 seconds. The top is open and the paraffin coats the inside as well as the outside. The containers are then drained for 12 seconds and immediately conveyed a few inches into a cooling compartment where they are cooled to 39 degrees Fahrenheit.

The next step in this same machine is the filling. In the case of a quart container a pint is first injected automatically. Then the second pint is injected and a puff of steam eliminates any foam.

The top is immediately folded by the machine and sealed by a slight melting of the paraffin as the top is pressed between two hot irons. The date is automatically stamped on the top and a hot (450°) tinned wire staple is clinched through the folded and sealed top to prevent tampering. The filled and sealed containers are delivered to an operator who places them in either fibre or wooden cases for transporting to the stores and restaurants.

All of the above operations take place in one machine which is twenty-seven feet long and six feet wide and weighs approximately eight tons. The Pure-Pak machine delivers 30 containers per minute (any size, quarts, pints or half-pints), 1,800 per hour or 14,400 in an eight hour operating day.

History of Paper Milk Containers

● The idea of paper containers for milk is not new, but actual commercial production dates back to 1929. About

five different types of paper mill containers are in use today. Besides the Excello Pure-Pak, there is the American Can Company's container and the Sealright. The latter container is in use West of the Rockies in several California cities and in Reno, Nevada, for packaging milk, but it is understood that no Western dairy using these containers, which are made up at the factory, is employing them exclusively. The American Can Company's milk container is also factory set up and at present is largely limited to use in the metropolitan New York area. It is reported that the American Can Company has temporarily limited its market to this area due to inability to manufacture the containers in sufficient quantities to supply other potential markets.

In a report by M. J. Prucha of the Department of Dairy Husbandry, University of Illinois, entitled "Certain Sanitary Aspects of the Use of Paper Milk Containers," he starts out as follows: "The bottling of fluid milk is not a new idea. In a book published in 1909, 'Production and Handling of Clean Milk,' by Dr. Kenelm Winslow, the following statement appears on page 140: 'The latest departure in the way of a milk bottle is the single service milk container of wood pulp invented and made by G. W. Maxwell of 1201 Folsom Street, San Francisco, California. It is now in actual use by dairymen in Los Angeles.'" It is of interest to note that the Dr. Winslow mentioned is a practicing physician in the City of Seattle at the present time.

Since 1929 the use of paper milk containers has grown steadily, the expansion being limited largely by inability of the manufacturers to keep up with demand and also by the additions of improvements to the containers and to the filling and sealing machines.

The metropolitan New York area has naturally been the primary market because of the large amount of milk consumed and the expensiveness of distribution. Paper containers have been gaining steadily in favor in the New York area and today approximately 600,000 paper milk containers are sold every day in New York and its surrounding towns and cities.

The Pure-Pak machine has been perfected for a little more than two years but in that period some twenty-two machines have been installed and ten more are on order.

Besides the Gold Star Creameries installation some of the Middle Western and Eastern dairies using Pure-Pak machines and containers are:

● Dairy Sealed, Incorporated, of Ozone Park, Long Island (subsidiary of The Borden Company); Queensboro Farms, Long Island; Manchester Farms in the Bronx; The Janssen Dairy at Hoboken, New Jersey; Farmer's Cooperative Dairy in Wrightstown, New Jersey; The Jersey Maid Dairy in Bordentown, New Jersey; Sylvan Seal Milk Company of Baltimore, Maryland; Risdon Brothers, Incorporated of Detroit, Michigan; Kroger Dairy of Dayton, Ohio; Twin

Port Cooperative Dairy of Superior, Wisconsin, and the Evans Dairy of Brooklyn, N. Y.

Market Possibilities

• The advent of the Excello Pure-Pak paper milk container on the Pacific Coast opens up a new outlet for Pacific Coast bleached sulphite board, a new market of very great possibilities.

A little speculating on the size of this market is of interest although the following estimates can be nothing more than rough guesses due to the lack of accurate milk consumption figures in all centers of population on the West Coast.

At a recent hearing before the Seattle City Council the manager of one of the city's largest dairies stated that around 200,000 bottles of milk and cream were distributed daily in Seattle. This undoubtedly included the suburbs adjacent to Seattle which are covered by the distribution system of the Seattle dairies.

Half of the milk and cream sold in Seattle is distributed through stores and restaurants. On this basis, then, of 100,000 bottles or units per day sold through stores and restaurants (this is the market the paper container concentrates upon) 5 tons of .016 bleached sulphite board would be consumed daily in making 100,000 Pure-Pak containers.

Seattle is said to be below the national average of 12.75 ounces of milk per capita daily consumption with a per capita consumption of but 10.14 ounces.

• For the purposes of estimating other cities we will take the national average of 12.75 ounces per day per capita. In the case of Portland, Oregon, with a population in the 1930 census of 301,815 (no suburbs included) around 80,000 Pure-Pak containers would be used per day on a basis of half of the milk and cream sold. This would require roughly about 4 tons of board per day.

In the example of San Francisco no other Bay cities are included, just San Francisco proper. With a population of 634,394 in the 1930 census, San Francisco would on the basis of the national average, use 340,000 containers of milk and cream per day. If half of this were sold in Pure-Pak containers of 170,000, the board required to make these would be 8½ tons per day.

Los Angeles with a 1930 population of 1,238,048 would consume on the basis of the national average of 12.75 ounces per capita, around 490,000 quarts per day. But as all containers are not quarts we add one-third to the number of containers to include pints and half-pints. This raises the number of containers to 653,000 per day. Were half of these Pure-Pak containers or 326,000, around 16 tons of .016 bleached sulphite board would be required per day.

Summing up these estimates for Seattle, Portland, San Francisco and Los Angeles, and not including the much greater consumption of the smaller cities and towns west of the Rocky Mountains, we find an approximate daily board consumption of 33 tons, 1,000 tons per month, or 12,000 tons per year.

It should be kept in mind, to, that these estimates are based upon store and restaurant sales only or half of the total milk business in these cities. The estimates are undoubtedly much on the conservative side.

Political Opposition

The paper milk container has faced strong political opposition from the start, probably instigated by those whose interests would be disturbed by their widespread use.

Advances in sanitary conditions through scientific work invariably must battle ignorance and those who would lose business by the adoption of the improvements for the benefit of the people as a whole.

The pulp and board industry cannot safely assume that the use of paper containers for milk will grow naturally. If they wish to cultivate this market as an outlet for pulp and board production they must take part in the program of educating the public, the dairies and the officials of local and state governments.

It is understood that the New York Metropolitan area was the primary battleground. There the fight has been largely won on the sanitary and convenience merits of the paper container as is proved by the sale of some 600,000 paper milk containers each day in New York City.

• Generally recognized as having the strictest milk marketing rules, New York's adoption of the paper container should point the way to dairies and officials in smaller communities. The Department of Health, City of New York, itself bottles and distributes milk in paper containers. On December 31st, S. Abraham, chief of the Division of Milk Inspection, Bureau of Food and Drugs, Department of Health, City of New York, wrote the Pure-Pak Division of Excello saying that, "The protection provided on these containers is in accordance with provisions of Section 156, regulation 155, governing the covering of the pouring lip on containers used for Grade 'A' milk." The public against disease.

The Gold Star Creameries of Everett, Washington, have not had smooth sailing. The law of the State of Washington was amended several years ago to permit the sale of milk in paper containers and Gold Star has been issued Permit No. 360, the first permit issued by a state west of the Rockies for 100 per cent operation on paper containers.

The City of Everett has granted the company a permit to sell in Everett through an emergency ordinance passed

February 9th and which went into effect immediately.

On December 2nd, 1937, an amendment to the Seattle ordinance dealing with milk distribution was introduced permitting the sale of milk in paper containers. It was passed by the City Council, signed by Mayor Dore and went into effect January 21st, 1938. However, on that day Dr. F. M. Carroll, city health commissioner presented a petition to the public safety committee of the council asking that he be permitted to refuse inspection service for any additional pasteurization plants located outside the city limits, on the ground that he lacked funds to pay for such service. As the Gold Star plant is located in Everett and is new, the petition, were it passed as an ordinance, would have the effect of preventing paper milk containers from entering Seattle.

• The law of the State of Washington makes it mandatory for city health officers to inspect all milk plants selling in their city regardless of where these plants may be located.

Attorneys for the Raw Milk Producers and Distributors were reported as saying that Dr. Carroll's proposal "tends to foster a milk monopoly in Seattle which would increase the cost of milk to the consumers."

Arthur G. Cohen, attorney for the Gold Star Creameries, Incorporated, was reported as saying in part that, "It seems quite a coincidence that this question of banning outside milk inspection is raised at the time our Everett industry is just starting."

Opposition of Seattle dairies to the introduction of paper containers was voiced by J. E. Gates, Seattle manager for the Carnation Company, who was quoted in the papers as saying that there are twenty-six pasteurization plants in Seattle employing local labor, paying local taxes and buying supplies here and that they can handle 90 per cent of the milk sold here.

He asserted, according to the Seattle Post-Intelligencer, that paper containers for milk have been tried in many cities and found impracticable.

• Quoting Mr. Gates' statement as it appeared in the Post-Intelligencer: "Approximately 200,000 bottles of milk are sold in Seattle every day. Paper containers to handle this quantity of milk would

(Continued on page 33)

The Paper Milk Container Opens Large Board Market

12,000 tons of board per year for packaging HALF the milk sold in FOUR Pacific Coast cities.

It is roughly estimated that if half (that sold in stores and restaurants) of the milk sold in the four Pacific Coast cities of Seattle, Portland, San Francisco and Los Angeles, were packaged in Pure-Pak containers, 1,000 tons of .016 bleached sulphite board would be required each month, or 12,000 tons per year.

This estimate includes but a small portion of the milk sold in the area west of the Rocky Mountains and from the Canadian to the Mexican borders.

Potential Rayon Production In the Pacific Northwest —

Marketing Considerations

by WILLIAM C. McINDOE, Consulting Chemist

IN any industrial investigation of locations for a manufacturing plant the items of available markets and transportation costs to those markets must be evaluated early in the study.

A rayon plant located in the Pacific Northwest would find its present domestic yarn markets all on the Atlantic seaboard from Massachusetts to the Carolinas. Consequently, a balance would have to be struck between the Pacific advantages of low costs of manufacture and proximity to abundant pulp supplies on the one hand and the cost of transportation of the rayon yarn to these distant markets on the other hand.

● A well established rayon yarn plant in the Pacific Northwest could expect to dominate the potential markets in the twelve states west of the Rocky Mountains, including Texas. According to the 1930 Census these states had a total population of 17,721,737. By the end of 1936 the national population increased from the 1930 figure of 122,775,046 to 126,361,346.¹ Assuming that these western states increased in population at the same rate, their total 1936 population becomes 18,241,500. Using the combined estimated 1937 domestic production of yarn and staple, 345,000,000 pounds, as the domestic consumption (an assumption necessarily in error by the amount of the yet unavailable imports figure), the per capita annual yarn consumption becomes 2.73 pounds, or 11.84 yards per capita as fabrics. On this basis the logical western domestic market amounts to 49,799,295 pounds as yarn, or 215,979,360 yards woven as fabrics. Obviously, this consumption would support five rayon plants of average size, 10,000,000 pounds annual capacity each. This market would have to be developed by an aggressive sales staff.

Also, let me remind the reader again of last year's major market developments in rayon utilization: first, rayon cord fabrics for high-

speed bus and heavy duty truck tires and, secondly, the introduction of rayon into the canvas, duck and sheeting fields, or, the mechanical and industrial uses of rayon as distinct from the clothing outlet. The America's Cup racing sloop "Ranger" had sails of rayon fabric.² The 1935 U. S. Census of Manufactures states that the rubber automobile tire business had a value of approximately \$320,000,000.³ With rayon cord rapidly replacing cotton in the fabric of tires, the rayon industry gains an important share in this \$320,000,000 industry. We of the Pacific Coast have the world's second largest rubber center located in Los Angeles, California.

● Until a Pacific rayon plant becomes well established, however, it would be forced to market its product in the existing textile markets of New England, New York, New Jersey, Pennsylvania, Virginia, and the Carolinas, while developing closer markets in its own "sphere of influence." Such initial marketing is primarily a problem of transportation costs.

Since all of the chemicals are articles of present Pacific manufacture, a logical assumption is that transportation costs for these chemicals to the location of the proposed Pacific rayon plant would balance those of eastern chemicals to eastern rayon plants. Then, it becomes reasonable to base the transportation cost study on the combined movements of rayon wood pulp to the rayon plant and then the rayon yarn produced to the textile markets.

For the purposes of this transportation cost study, Vancouver, Washington (or Portland, Oregon), and/or Shelton, Washington, were chosen as typical Pacific Northwest plant sites, being centrally located. The existing eastern rayon plants at Old Hickory, Nashville, Tenn.; Richmond, Virginia; Marcus Hook, Pennsylvania; Lewiston, Pennsylvania; Buffalo, New York; and Cleveland, Ohio, were chosen as representing the Atlantic seaboard.

Actual and potential movements of pulp and yarn to and from these locations were studied.

Space does not permit all six of these eastern locations to be discussed in detail; therefore the freight rates for all are shown graphically on the accompanying map, while Richmond, Virginia; Marcus Hook, Pennsylvania; and Cleveland, Ohio, are contrasted with the Vancouver, Washington, and Shelton, Washington, locations.

Pacific Rayon

Vancouver, Washington, is situated on tide-water at the head of deep draft navigation on the Columbia River.

At Vancouver, Washington, a rayon plant would get its wood pulp by rail from the Puget Sound and Olympic Peninsula mills (or cotton linters by water from California). The finished yarn would be shipped from its own docks by water via the Panama Canal to the New York-New Jersey and New England markets.

At Shelton, Washington, a rayon plant would be alongside the Rayonier rayon pulp mill and consequently could expect to receive its pulp without transportation charges to all intents and purposes. Being on tidewater, Hammersley Inlet of Puget Sound, its yarn product would go by water via the Panama Canal to the New York market (not over a 28-day trip).

At Tacoma, Washington, similar conditions prevail with better dockage and shipping facilities at present.

Hammersley Inlet is being dredged for a ship channel, however.

Atlantic Coast Rayon

● The Richmond, Virginia, plant is so strategically located that not only does it enjoy a choice of alternative sources of pulp; but, also,

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RAYON yarn and finished products made from RAYONIER INCORPORATED'S RAYONIER bleached sulphite dissolving pulps » » » The long rayon filaments as shown in the skein of yarn at the left when cut into short lengths makes STAPLE FIBER, shown in the center, which is rapidly growing in popularity » » » Staple fiber is short length rayon processed by wool cotton or linen systems and usually mixed with one or more of these natural textile fibers to produce new types of fabrics » » » At the right is viscose transparent velvet and the bath towel is of rayon and staple fiber.

as to markets for its yarn. Their pulp may be western hemlock from Puget Sound by water via the Panama Canal, landed at Newport News and delivered thence by rail; or eastern spruce by rail from Temiskaming, Quebec; or from Campbellton, New Brunswick, by chartered steamer to Newport News for rail delivery to Richmond. The yarn can go to New York and New England by rail, or into the textile mills of Pennsylvania, Virginia, and the Carolinas.

The Marcus Hook, Pennsylvania, plant, being located on tidewater on the Delaware River about 20 miles below Philadelphia, can receive its pulp by water either from Puget Sound or from Campbellton, New Brunswick. Rail pulp deliveries come from Temiskaming, Quebec, Berlin, New Hampshire, or South Brewer, Maine. Proximity to the Pennsylvania and New York-New Jersey mill centers gives it a highly advantageous marketing position for its yarn.

The Cleveland, Ohio, plant, intended perhaps to serve the Middle West, gets its pulp by rail from Temiskaming, Quebec, and ships its yarn by rail to Chicago, Illinois, and New York-New Jersey, and New England.

Transportation Costs

For the movements of pulp and yarn outlined above, the transportation costs were calculated per short ton of finished yarn laid-down at the New York and New England markets. The total cost of water shipment of yarn from the Pacific Northwest to New York and New England includes transit insurance of \$0.30 per \$100.00 valuation. Certain of the water carriers have estimated that a reasonable volume of yarn moving might reduce the existing rate of \$0.90 per 100 pounds to about \$0.75. Consequently, that potential figure has been included in the calculations. The cost of moving the pulp to the rayon plant is

corrected for the manufacturing requirement (viscose process) of 1.15 tons of pulp for every ton of rayon yarn produced. The calculated costs appear in the table below:

Examination of the cost data for the six eastern sites chosen demonstrates the fact that a Pacific Northwest rayon plant could compete on the present eastern market at a profit wherever an existing eastern plant has to pay between \$21.00 and \$23.00 (on the above tabular basis) to deliver one ton of yarn to the New York market; and between \$23.00 and \$25.00 to reach the New England market by using the 25½ day water haul via the Panama Canal.

Also, it is interesting to note that some of the eastern plants are far enough removed from their pulp sources to dissipate their advantage of proximity to markets. Eastern plants on or near enough to tide-water can and do bring western hem-

lock pulp by water all the way from Puget Sound cheaper than from some eastern pulp sources with an all rail haul.

● Having thus developed the proof that the water borne transportation costs for rayon yarn leave a Pacific Northwest rayon plant at Vancouver, Washington, and/or Shelton or Tacoma, Washington, definitely in the competitive picture with the major eastern concerns, let us recalculate the truly western advantages of low power and fuel (for process steam) costs in terms of additional tonnages of yarn that could be moved to markets at existing freight rates financed by savings realized due to this combined advantage over typical eastern locations. Also, although the Pacific Northwest is at present enjoying a transient advantage in the cost of direct labor, let us use the 1936 labor cost which favors the East slightly.

Assume then that we have built and are operating a rayon plant of 5,000 tons yarn per year capacity at Vancouver, Washington, and, consequently are enjoying the advantage of cheap power from Bonneville Dam (approximately 2.5 mills kwh. delivered) and are using hogged fuel half of the time and fuel oil the other half for generating process steam. These advantages are decreased slightly by the eastern advantage in the cost of labor. It is estimated that the Vancouver location would involve a barging cost of \$0.06 per barrel for fuel oil and \$0.75 per unit for the hogged fuel, with f.o.b. prices at \$1.15 and \$0.75, respectively.

Using the tabulation of the cost of steam and power reported earlier⁴ and the cost of direct labor,⁵ the Vancouver plant combined costs for these items become (Table II):

● On comparison with similarly developed data for Buffalo, New York, Cleveland, Ohio, and Richmond, Virginia, the Vancouver, Washington, plant site has advantages of the following magnitudes: over Buffalo, of from \$59,622 to \$68,277 for the viscose process and from \$209,158 to \$217,389 for the acetate process; over Cleveland of \$75,313 for the viscose process and \$202,148 for the acetate process; and an advantage over Richmond, Virginia, of \$60,571 for the viscose and \$178,911 for the acetate process.

Reduced to unit quantities, the Vancouver advantage ranges between \$0.0061 and \$0.0075 per

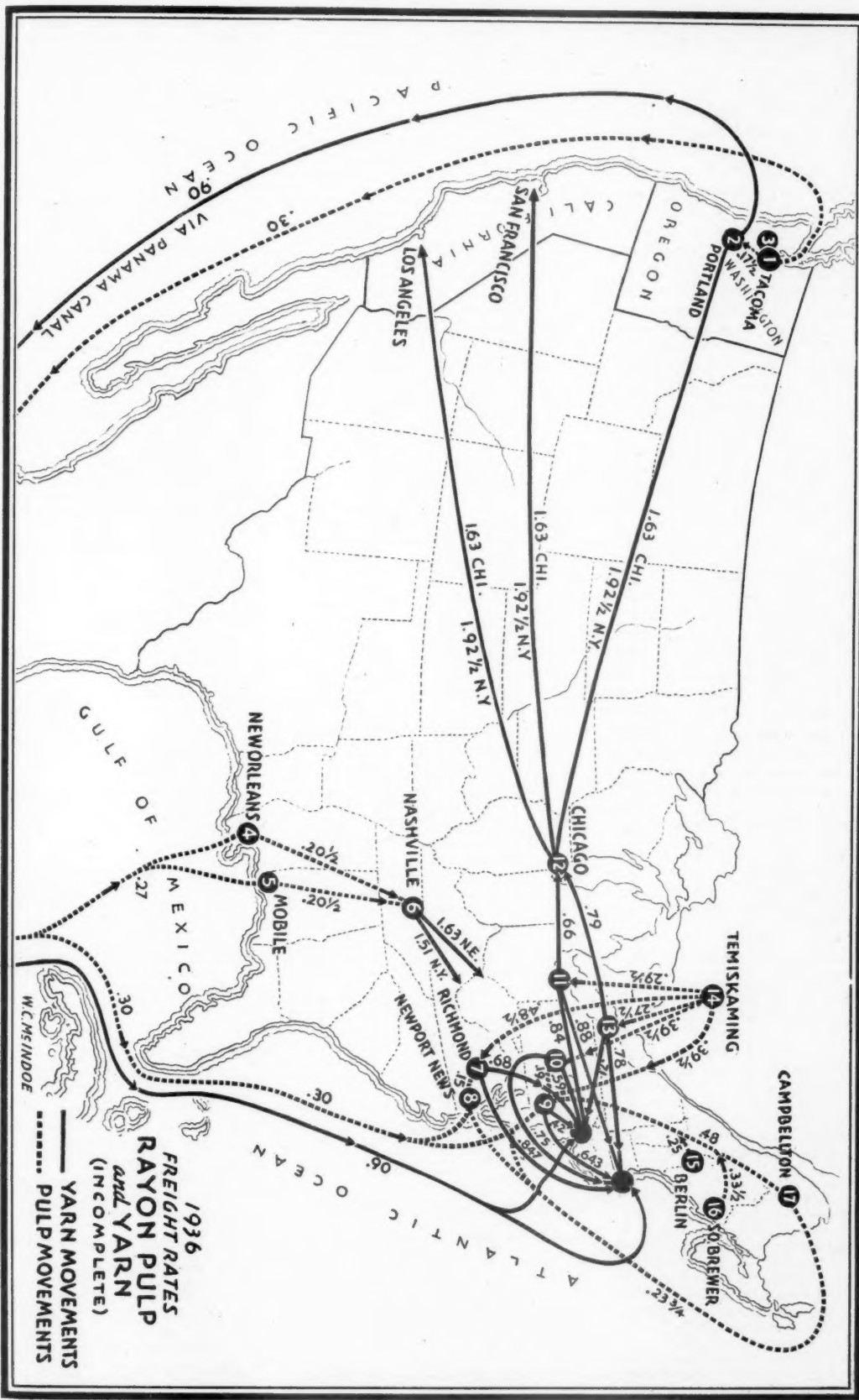
Table I

Cost of Transportation, Pulp to Rayon Plant and Finished Yarn to Market, based on published freight rates as of March, 1937. (Per ton of 2000 pounds of finished yarn).

Pulp and Rayon Movements.	Textile Markets					
	Chicago	New York		New Eng.		
PACIFIC NORTHWEST:						
(1) Pacific Rayon at Vancouver, Wn.						
Pulp: Tacoma-Vancouver	Rail (3.50)	Water	Rail (\$3.50)	Water	Rail (\$3.50)	Water
x 1.15*	4.03		4.03	4.03	4.03	4.03
Yarn: Vancouver	32.60		38.50	18.00	38.50	18.00
Transit insurance				3.60		3.60
Wharfage						0.25
TOTAL	36.63		42.53	25.63	42.53	25.88
Potential 75c cwt.				42.63		22.88
(2) Pacific Rayon at Shelton, or Tacoma, Wash.						
Pulp: no charge						
Yarn: Shelton or Tacoma	\$32.60		\$38.50	\$18.00	\$38.50	\$18.00
Transit insurance				3.60		3.60
Wharfage						0.25
TOTAL	32.60		38.50	21.60	38.50	21.85
Potential 75c cwt.				18.60		18.85
ATLANTIC COAST:						
(3) Richmond, Va.:						
a) Pulp: Tacoma, Wn.-Newport News				(6.00)		(6.00)
x 1.15*				6.90		6.90
Wharfage x 1.15				0.81		0.81
RR-Rich. x 1.15				2.99		2.99
Yarn: Richmond				13.60		16.94
TOTAL				24.30		27.64
b) Pulp: Campbellton, N. B.-Newport News				(\$4.75)		(\$4.75)
x 1.15*				5.46		5.46
Wharfage x 1.15				0.81		0.81
RR-Richmond, x 1.15				2.99		2.99
Yarn: Richmond				13.60		16.94
TOTAL				22.86		26.20
c) Pulp: Temiskaming, Q. to Richmond				(\$9.70)		(\$9.70)
x 1.15*				11.16		11.16
Yarn: Richmond				13.60		16.94
TOTAL				24.76		28.10
(4) Marcus Hook, Pa.:						
a) Pulp: Tacoma-M. Hook				(\$6.00)		(\$6.00)
x 1.15*				6.90		6.90
Yarn: Marcus Hook				8.40		12.86
TOTAL				15.30		19.76
b) Pulp: Berlin, N.H.-Marcus Hook (RR)				(\$5.00)		(\$5.00)
x 1.15*				5.75		5.75
Yarn: Marcus Hook				8.40		12.86
TOTAL				14.15		18.61
c) Pulp: S. Brewer, Me.-Marcus Hook (RR)				(6.70)		(6.70)
x 1.15*				7.71		7.71
Yarn: Marcus Hook				8.40		12.86
TOTAL				16.11		20.57
d) Pulp: Campbellton, N.B.-Marcus Hook				(9.60)	(4.75)	(9.60)
x 1.15*				11.04	5.46	11.04
Yarn: Marcus Hook				8.40	8.40	12.86
TOTAL				19.44	13.86	23.90
e) Pulp: Temiskaming, Q.-Marcus Hook				(\$7.90)		(\$7.90)
x 1.15*				9.09		9.09
Yarn: Marcus Hook				8.40		12.86
TOTAL				17.49		21.95
(5) Cleveland, Ohio:						
Pulp: Temiskaming, Q.-Cleveland (RR)				(\$5.90)		(\$5.90)
x 1.15*				6.79		6.79
Yarn: Cleveland				13.20		17.60
TOTAL				19.99		23.59

* 1.15 tons pulp required per ton of yarn produced.

LEGEND: 1. Tacoma; 2. Portland; 3. Shelton; 4. New Orleans; 5. Mobile; 6. Nashville; 7. Richmond; 8. Newport News; 9. Marcus Hook; 10. Lewistown; 11. Cleveland;
12. Chicago; 13. Buffalo; 14. Temiskaming; 15. Berlin; 16. South Brewer; 17. Campbellton.



pound of viscose yarn and between \$0.018 and \$0.022 per pound of acetate yarn. With market values of \$0.57 and \$0.65 per pound, respectively, these advantages seem small in percentages; but when used to finance shipments of additional tonnage to the New York and New England textile markets, the following significant additional tonnages could be shipped (Table III):

Notice that, in the case of the acetate process, this Pacific Northwest advantage would finance the shipment of the entire output of an additional plant considerably larger than the one assumed at Vancouver.

● This may seem to be an entirely unorthodox and novel argument to propose in favor of a Pacific

Northwest rayon plant — even like "counting chickens before they hatch"—but, unless some totally unforeseen factors operated against it, should prove valid.

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¹Illustrated Atlas, Rand & McNally, 1937.

²Textile World, Vol. 87, 104, Sept., 1937.

³Chemical & Metallurgical Engineering, Vol. 44 (No. 9, Part II), p. 584, Sept., 1937.

⁴Pacific Pulp & Paper Industry, Vol. II (12), pp. 37 and 39, Dec., 1937.

⁵Table XXXV, page 188, The Economic Possibilities for Rayon Production in the Pacific Northwest, June 1, 1937, by W. C. McIndoe, Industrial Chemist, Corps of Engineers, U. S. Army, Office of the Division Engineer, North Pacific Division, Portland, Oregon (War Department release of January 15, 1938).

Table II

Vancouver Operating Costs — Labor, Power and Steam
(1936 Basis)

Items	Annual Cost	
	Viscose Process	Acetate Process
Direct Labor	\$2,119,452	\$ 509,272
Power at 2.5 mills per kwh.	80,088	76,471
Steam (fuel for)	133,627	224,200
TOTAL	\$2,333,167	\$ 809,943
Market Value of Rayon Yarn	\$5,700,000	\$6,500,000

Table III

Addition Tonnage Shipments of Yarn to Markets, Financed by Pacific Northwest
Annual Cost Advantage for Power + Steam — Labor

(Basis: 5,000 tons yarn per year initial production at Vancouver; Freight rate: \$25.63/ton to New York and \$25.88/ton to New England)

Competitive Site and Process.	Total Western Cost Advantage	Additional Tonnage Moved to Markets	
		New York	New Eng.
Buffalo, New York:			
Viscose—Maximum	\$68,277	2,664	2,638
Minimum	59,622	2,326	2,304
Acetate—Maximum	217,389	8,482	8,400
Minimum	209,158	8,107	8,082
Cleveland, Ohio:			
Viscose	75,313	2,938	2,910
Acetate	202,148	8,277	7,811
Richmond, Virginia:			
Viscose	60,571	2,363	2,340
Acetate	178,911	6,981	6,913

New Coast Members of TAPPI

● Coast men who recently joined the Technical Association of the Pulp & Paper Industry include, James B. Hyde of the Crown Zellerbach Corporation at Camas, Washington. Mr. Hyde is a 1920 graduate in mining engineering from Oregon State College and has been connected with the Anaconda Copper Mining Company, the Burroughs Adding Machine Company and the U. S. Department of the Interior as geologist.

Einer Walloe, sulphate superintendent of Pacific Mills, Limited, at Ocean Falls, British Columbia, is a 1922 graduate of the University of Oslo, Norway. He was

formerly with the Borregard Company of Oslo and the Howard Smith Paper Mills, Limited, of Montreal.

James Brinkley Returns From Southern Trip

● James Brinkley, president of the James Brinkley Company, Seattle, conveying and material handling engineers, returned the middle of January from a month's trip to Tennessee and Florida. Mrs. Brinkley and their three sons accompanied Mr. Brinkley.

Otto C. Schoenwerk, consulting pulp and paper mill engineer, well known for his work on the Pacific Coast, spent

Christmas at his home in Coral Gables, Florida and was visited there by Mr. Brinkley. Mr. Schoenwerk is finishing his work on the Brunswick Pulp & Paper Company's 150-ton bleached kraft mill at Brunswick, Georgia, which started early this month.

Mr. and Mrs. Brinkley and their sons enjoyed Christmas at Delray Beach, Florida, and spent some time at their former home in Memphis, Tennessee, before returning to Seattle.

Walter Hodges Returns to Coast

● Walter Hodges, prominent machine clothing man, returned to Portland Jan. 17 after a trip of four weeks through the East. He renewed contact with the various manufacturers which he represents on the Coast, and visited a few of the mills.

In the course of his trip he visited Piqua, Ohio; Philadelphia, Woonsocket, R. I.; Montreal, Ottawa, Kalamazoo, Michigan, and Appleton, Wisconsin.

Mr. Hodges found that the Coast mills are, in general, enjoying better business than those in the Mid-West and East.

Spaulding Operating

● The Newberg, Oregon, mill of the Spaulding Pulp & Paper Company is operating four days a week, and is expected to continue on this schedule through the month of February. Shipments to Japan have not yet been resumed, but it is considered possible that pulp will begin moving to the Orient during the second quarter.

The annual meeting of the company is to be held on Wednesday, March 2nd.

Teren on Mexican Trip

● Nils G. Teren of the Oregon Pulp & Paper Co. and affiliated concerns, left Portland Jan. 26 for a trip to California and Mexico. He expected to visit Mexico City, returning to the Northwest about the end of February.

Stam Back From California Trip

● Ed Stam, timber manager in Portland for the Crown-Zellerbach Corporation, is back after spending several weeks in California, where he spent some time in both San Francisco and Los Angeles.

West Linn Paper Makers Hold Annual Ball

● The annual ball of the Paper Makers' Union No. 166 was held at the West Linn, Oregon, inn on Saturday, February 12. The event was handled by a committee composed of Roland Reimann, chairman, Leon Dupasquier and William Schultze.

Rayon

and other
CHEMICAL USES
OF WOOD PULP



World Rayon Production Rises in 1937

● The Rayon Organon's estimate of 1937 world rayon and staple fiber production (actual production figures will not be available until June) shows an increase of 32 per cent in the combined production over 1936.

In 1937 it is estimated that world production of rayon filament yarn amounted to 1,125,000,000 pounds, and rayon staple fiber production was 600,000,000 pounds, making a total of 1,725,000,000 pounds. Actual production in 1936 of rayon filament yarn totaled 1,006,000,000 pounds and rayon staple fiber 299,000,000 pounds. The world filament rayon increase is estimated to have been 119,000,000 pounds over 1936, or 11.8 per cent.

Staple Doubles in Year

● World production of staple fiber is estimated to have been 600,000,000 pounds in 1937 against 299,000,000 pounds in 1936, an increase of just over 100 per cent.

In four year's time world production of rayon staple fiber has grown from 52,700,000 pounds in 1934 to 600,000,000 pounds in 1937, an increase of 1,052 per cent.

During this same period, 1934-1937, filament rayon world production grew from 771,100,000 pounds to 1,125,000,000 pounds, an increase in yearly production of 46 per cent.

Even more amazing is the growth of staple fiber production throughout the world since 1930 when the total production was 6,100,000 pounds. Compared with the 1937 production of 600,000,000 pounds the increase expressed in percentage is 9,736 per cent.

In the same period, 1930-1937, filament rayon production increased 149.7 per cent.

U. S. Produced 28% of Filament Yarn

● Of the world's filament yarn production in 1937 the United States is estimated to have produced 28 per cent, while Japan produced some 325,000,000 pounds, or 29 per cent.

In staple fiber production the United States manufactured but 3 per cent, while Japan produced 29 per cent of the world production. Germany and Italy materially expanded their staple fiber production during the past year.

Japanese Staple Fiber Attains Record Production

● The Rayon Organon reports that "Japanese rayon staple fiber production for 1937 is expected to reach the amazing total of about 175,000,000 pounds. This represents an increase of 130,000,000 pounds or 290 per cent over the 1936 production figure of 45,850,000.

This growth may be attributed first to the fact that this industry is one of those whose expansion is not restricted by law, and second to the compulsory mixing of rayon staple fiber with cotton and wool.

"The recent regulations for mixing staple fiber and cotton has made it compulsory for most cotton goods to contain 30 per cent rayon staple fiber. Regulations have already been made for the mixture of wool and staple fiber. With

such stimulants, staple fiber production in Japan should continue to make huge strides during 1938."

U. S. Buys Staple Fiber From Britain

● During the first nine months of 1937 Great Britain exported 5,090,332 pounds of staple fiber compared with 2,454,031 pounds in the corresponding 1936 period. The largest purchaser was the United States with 2,743,700 pounds in the first nine months of 1937 as compared with 958,869 pounds in the same 1936 period.

Other customs for British staple fiber were Canada with 640,494 pounds; Czechoslovakia, 501,243 pounds; Sweden, 357,246 pounds; Netherlands, 342,060; Germany, 188,890 pounds, and Norway, 82,369 pounds.

U. S. Rayon Yarn Production Up 12% in 1937

Staple Fiber Increased 63%

● The Rayon Organon, published by the Textile Economic Bureau, Incorporated, has released the following brief review of the American rayon industry for 1937:

"The extremes of rayon market optimism and pessimism were seen during the first and last months of 1937 respectively. The January tempo was one of yarn shortage, increasing cloth production, and larger inventories of cloth and finished goods. By December, each of these tendencies was in reverse.

"American rayon yarn production during 1937 increased about 12 per cent over 1936, on the basis of yearly estimates. The 1937 yarn shipments were lower, however, than those of the year before. Domestic rayon staple fiber production increased by approximately 63 per cent from 1936 to 1937 and shipments here likewise increased substantially.

Filament yarn production in the United States during 1937 reached a new high total of 312,236,000 pounds as compared with 277,626,000 pounds in 1936. The viscose plus cuprammonium yarn production in 1937 was 238,191,000 pounds, an increase of 11 per cent over its 1936 total. (Cuprammonium yarn production is not given separately to avoid disclosing individual plant production).

Cellulose acetate yarn production in this country during 1937 amounted to 74,045,000 pounds, an increase of 18 per cent over 1936.

Production of rayon staple fiber in the United States during 1937 totaled 20,100,000 pounds, an increase of 63 per cent over the 1936 total of 12,300,000 pounds.

● "In yarn prices, there were three principal dates during 1937: the removal of the quantity or term discounts on

January 1, 1937; the April increase of about 3 cents per pound affecting all deniers; and the mid-December reduction in the fine denier viscose prices. The guarantee against price reduction was applied to all types of yarn in December. In staple fiber, the acetate staple was reduced in February and the viscose staple price was lowered in September; both of these price changes represent new low levels.

"The year 1937 was featured by increased costs of rayon production especially in labor and raw material. The official figures of the United States Bureau of Labor Statistics show that average hourly wage rates in the rayon industry increased by 64 per cent from March, 1933, to August, 1937. Similarly rayon pulp prices were increased by 35 per cent in late 1937. Yet the price of 150 denier viscose rayon had increased only from a level of 55 cents per pound in 1933 to the current 63-cent figure, or 15 per cent.

"The investigation of the rayon industry during 1931-1932, which had been conducted by the Federal Trade Commission since early 1934, finally was concluded in July, 1937, by the issuing of a cease and desist order. The wording of this order, as well as the lack of specifications of prohibited acts, was viewed in the market as a practical vindication of the rayon producers.

● "Finally, the issuing of rayon identification rules by the Federal Trade Commission in late October may well be viewed as the most important single event of 1937 in the rayon industry. Rayon identification has been encouraged by the industry for a long time, and the principles of these rayon rules thus have met with wide approval. As noted, it is believed that history will show these rayon rules to be a real milestone of industry progress."

Japan Grants Permits For Unshipped 1937 Pulp

● Late in January a radiogram from the U. S. Commercial Attache in Tokyo advised the Bureau of Foreign and Domestic Commerce that the Japanese Ministry of Finance had approved the release of exchange to pay for unfilled and unshipped 1937 pulp contracts amounting to 58,023 tons valued at 16,967,000 yen.

The reports stated that these shipments on the unfilled 1937 contracts were to be apportioned over the first four months of 1938 as follows:

January, 15,210 tons valued at 4,439,000 yen; February, 21,681 tons valued at 6,368,000 yen; March, 12,580 tons

valued at 3,622,000 yen; April 8,552 tons valued at 2,537,000 yen.

While the report did not state what grades of pulp are included in these permitted shipments, it is assumed that the greater portion is rayon and staple fiber pulp as these grades are more important to Japan in manufacturing products for export. Further, Japan has curtailed domestic paper production drastically as an economy measure, and has reduced somewhat the rayon yarn production for domestic consumption, but is encouraging the expansion of the staple fiber industry because its product mixes with wool, cotton and rayon, reducing considerably the imports of wool and cotton.

Industrial Rayon Planning Staple Fiber Plant

It is reported that the Industrial Rayon Company of Cleveland, Ohio, is preparing plans for a new plant to make cut staple rayon (staple fiber). The plant is to be located either at Painesville, near Cleveland, where Industrial is completing a rayon yarn plant begun some months ago, or at Covington, Virginia. The proposed plant is to have a capacity of from 10,000,000 to 15,000,000 pounds of staple fiber per year.

Japanese November Pulp Imports for Rayon and Staple

● Imports into Japan of pulp for rayon and staple fiber manufacture during November amounted to 31,980 metric tons valued at 8,924,735 yen, making total imports for the first 11 months of the year 265,485 metric tons, valued at 71,982,944 yen. During October 35,831 tons of rayon and staple fiber pulp, having a value of 10,418,249 yen, were imported.

Restrictions and Permits

The American Consulate at Osaka reports through the Bureau of Foreign and Domestic Commerce of the U. S. Department of Commerce as follows:

"It is becoming increasingly apparent that the importation of pulp into Japan during 1938 will be subject to drastic restriction. The revised application recently filed by the Japan Rayon Producers' Association for permission to import next year 220,000 tons of pulp, instead of 250,000 tons as originally requested, has been rejected by the Ministry of Commerce & Industry as excessive. The Ministry officials take the view that the present stocks in Japan of rayon pulp (estimated at 134,00 tons) are adequate to meet the industry's need for the first half of 1938, particularly in consideration of the production curtailment

measures now being carried out at all mills, according to local Japanese press reports.

"While permission has already been granted for the importation during 1938 of 159,000 tons of pulp for the manufacture of staple fiber, it is believed possible that the authorities may later find it necessary to reduce this amount. According to one dealer well acquainted with the pulp trade in Japan, no permits are likely to be issued during the coming year by the government for the importation of either rayon or staple fiber pulp until March at the earliest and, more probably, not until April."

Japanese Rayon Costs Reported Increasing

● In the January issue of the Rayon Organon it is reported that:

"An increase in the price of raw materials, and higher depreciation and operating expenses, are expected to raise appreciably the cost of producing Japanese rayon yarn in 1938. Today the cost of producing 120 denier yarn is reported at 73.00 sen, allocated as follows (yen at 29 cents):

● "These Japanese figures, for the first time to our knowledge, recognize the existence of depreciation charges as applied to rayon production cost."

Japanese Rayon Costs Per Pound

	Sen	Cents	Per Cent
Pulp	25.00	7.3	34.3
Caustic Soda	9.00	2.6	12.3
Sulphuric Acid	2.50	0.7	3.4
Other Chemicals	3.00	0.9	4.1
Coal and Motive Power	8.00	2.3	11.0
Wages	5.50	1.6	7.5
Packing and Other Charges	3.50	1.0	4.8
Freight, Rebates and Office Expense	7.00	2.0	9.6
Repairing Fee (maintenance?)	1.50	0.5	2.0
Depreciation (6 sen) and Taxes (2 sen)	8.00	2.3	11.0
TOTAL COST	73.00	21.2	100%

Freight Rates to Orient Advanced February 8th

The Westbound Pacific steamship conference put into effect rate increases on a large number of products going to the Orient effective February 8th.

A number of paper and board products are included, but no further increase on wood pulp was made due to the fact that pulp rates had been materially raised on July 1st, 1937, to \$8.50 per ton for rayon grades and 8.00 for other grades.

The paper and board products on which increases have been made include: chip, news board (not corrugated), to \$8.50 from \$8 w/m; binder board to \$8.50 from \$8 w/m; building boards to \$8.50 from \$8 w/m; paper boxes, to \$8.50 from \$8 w/m; paper bags to \$12 from \$10 wt; paper notebooks, etc., to \$10 from \$9 wt; printing paper to \$9 from \$7 wt; roofing materials to \$9 from \$8 both wt. and w/m. (w/m means weight of 2,000 pounds or measure of 40 cubic feet whichever brings the greater revenue).

Lass Expands Paper Flower Pot Production

● "We have worked up a very good business in our 'Fibrelite' line of moulded fiber items made by our vacuum process," says W. P. Lass, head of the W. P. Lass Co. of Santa Cruz. "Before Christmas we ran three shifts of men here and shipped more than 20,000 items, largely to nurseries."

The Lass plant manufactures flower pots and bowls and is now going into the production of vases. Their raw product consists solely of old newspapers, bought locally, and worked into pulp.

The capacity of the plant's "forming wheel" is being doubled. This wheel has a set of arms which dip the molds into the pulp, which forms on the molds and cools in the shape of the desired product. This wheel is patented. It is expected to have ten molds, as against five in the past.

Nurseries took the flower pots before Christmas to fill a demand for them for gift plants.

Mr. Lass says the products will be lacquered in the future, instead of enamelled.

The company has taken over some of the old Alaska Pulp & Paper Co. equipment, including a compressor and vacuum pump. Up to now it has been sundrying its finished product but now a mechanical dryer will be installed and the pots sent through the machine on a conveyor.

"We can dry in an hour, in the machine, as many as we used to dry in a day in the sun," says Mr. Lass.

Simpson Elected Flintkote Vice-President

L. M. Simpson, general manager of Pioneer Division, The Flintkote Company, Los Angeles, was elected a vice-president of The Flintkote Company, by the board of directors at the January meeting in New York. The action was taken, according to I. J. Harvey, Jr., president of the company, because the directors thought that so important a territory as the eleven western states should be represented by a vice-president of the corporation as well as a general manager of the activities being directed from Los Angeles.

Mr. Simpson is well known as an industrial leader in Southern California, having been active head of Pioneer Division, The Flintkote Company, since 1934. Prior to that time he directed the national sales activities of one of the largest industrial concerns in the country, organizing its branch offices and also cooperating with the research and production departments to help in the improvement of product design and quality. Mr. Simpson has always been interested in sales since he first started out in the business world after attending the University of Illinois. As general manager of Pioneer Division, he naturally has spent considerable time on sales and distribution problems.

His wide experience and extensive contacts throughout the West gained in his sales work have given him a keen appreciation of the growing importance of the West as a market, and he has directed the expansion of the company to take full advantage of the ever increasing building and industrial activity in this territory. In 1937, the company's extensive expansion program included the erection of a new paper mill, new warehouses and a completely new and modern corrugated container plant.

Pioneer Division, The Flintkote Company, was established in 1888 and this year celebrates its Golden Anniversary. The company manufactures a complete line of asphalt roofing products, emulsions, structural and home insulation, hardboard products, chipboard and box-

board, and corrugated board and containers. Western offices are located in San Francisco, Portland, Seattle, Spokane, Salt Lake City and Denver.

Eastern plants of The Flintkote Company are located in Rutherford, New Jersey; Lockport, New York; East Chicago, Illinois; New Orleans, Louisiana. The company also conducts a Colas Roads operation in Canada and an emulsion business in Europe.

Dr. Benson To Inspect European Pulp Schools

Dr. H. K. Benson, executive officer of the Department of Chemistry, University of Washington, Seattle, will leave April 15th for Rome to attend the tenth International Congress of Pure and Applied Chemistry which meets from May 15th to the 21st. Dr. Benson is to present a paper on a subject with which he is thoroughly familiar, "Chemical Utilization of Wood in the United States."

He will also go as a delegate from the National Academy of Science to the International Union of Chemistry which meets in Rome concurrently with the Congress.

While in Europe Dr. Benson will visit the several technical schools specializing in pulp and paper mill training and in cellulose and lignin chemistry in Germany, France, Finland, Sweden and Norway. Dr. Benson will return to Seattle some time in September. Mrs. Benson will accompany her husband on his extended European trip.

Golden Gate Exposition to Have Chinese Paper Exhibit

China's early art of paper making will be portrayed in the "Good Earth Village," which will be the Chinese part of San Francisco's 1939 Golden Gate International Exposition.

Invention of paper is given by some authorities to the early Chinese and their records show that in 105 A. D. a court eunuch officially reported the invention to the emperor. The authorities say that the early Chinese experimented with and utilized many of the ingredients going into the papers of today.

Parchment was used as paper money by the Chinese in the year 119 B. C.

November Pulp Imports Maintain High Level

The release of preliminary figures on wood pulp imports for November, 1937, by the U. S. Department of Commerce indicates that the total pulp imports for 1937 are going to be approximately the same as for 1936.

For the first eleven months of 1937 imports of chemical wood pulp total 2,014,811 short tons as compared with 1,857,467 short tons in the same period of 1936, an increase of 157,344 tons or 8.5 per cent.

The November chemical wood pulp imports totaled 188,288 short tons, valued at \$8,510,562. November 1936 imports were 177,034 tons of a declared value of \$8,240,974. October 1937 imports amounted to 184,074 short tons of a declared value of \$8,240,974. Novem-

ber 1937 chemical pulp imports exceeded October and also November 1936 tonnage and value.

Included in the November 1937 imports were 84,470 tons of unbleached sulphite valued at \$3,358,598; 39,120 tons of bleached sulphite valued at \$2,378,566; 50,649 tons of unbleached sulphate pulp valued at \$1,871,373; 13,344 tons of bleached sulphate valued at \$859,412; and, 688 tons of soda pulp valued at \$37,639. Groundwood imports for last November totaled 19,351 short tons valued at \$389,792.

November-December News Print Statistics

Production in Canada during November 1937 amounted to 302,236 tons and shipments to 335,777 tons. Production in the United States was 79,338 tons and shipments 82,967 tons, making a total United States and Canadian news print production of 381,574 tons and shipments of 418,744 tons. During November 27,243 tons of news print were made in Newfoundland, so that the total North American production for the month amounted to 408,817 tons. Total production in November 1936 was 394,284 tons.

The Canadian mills produced 456,182 tons more in the first eleven months of 1937 than in the first eleven months of 1936, which was an increase of fifteen and eight-tenths per cent. The output in the United States was 23,017 tons or two and seven-tenths per cent more than in the first eleven months of 1936, and in Newfoundland 26,334 tons, or eight and eight-tenths per cent more, making a total increase of 505,533 tons, or twelve and five-tenths per cent.

Stocks of news print paper at the end of November were reported at 47,772 tons at Canadian mills and 24,064 tons at United States mills, making a combined total of 71,836 tons compared with 109,006 tons on October 31, 1937.

December Statistics

Production in Canada during December 1937 amounted to 293,038 tons and shipments to 306,137 tons. Production in the United States was 79,537 tons and shipments 88,339 tons, making a total United States and Canadian news print production of 372,575 tons and shipments of 394,476 tons. During December 26,085 tons of news print were made in Newfoundland, so that the total North American production for the month amounted to 398,660 tons. Total production in December 1936 was 396,961 tons.

The total North American output of news print paper in 1937 was 4,943,309 tons, of which 3,645,309 tons was made in Canada, 945,721 tons in the United States, and 352,687 tons in Newfoundland. The Canadian output was 14.2 per cent more than in 1936, that in the United States 2.6 per cent more, with a gain of 7.5 per cent in Newfoundland, making a total continental increase of 504,683 tons, or 11.3 per cent.

Stocks of news print paper at the end of December were reported at 34,552 tons at Canadian mills and 15,105 tons at United States mills, making a combined total of 49,657 tons compared with 71,558 tons on November 30, 1937, and 38,745 tons on December 31, 1936.



L. M. SIMPSON
Elected Vice-President
The Flintkote Company

Union Bag Operating In New Los Angeles Plant

Production Capacity
5,000,000 Bags Per Day

TO serve Pacific Coast customers more conveniently the Union Bag and Paper Corporation recently completed construction of a new and thoroughly up-to-date bag factory in the Central Manufacturing District of Los Angeles. Operations in the brick and concrete plant began in August, 1937, five months after the announcement was made public.

With a total floor space of 80,000 square feet and the latest in bag making and printing equipment the new Union Bag plant is capable of producing approximately 5,000,000 bags per day. Most of the bags turned out in the Los Angeles plant are bags that will be used as shelf packages, although a considerable quantity of shopping, millinery and bags of other types are also produced.

● The roof of the building is of unusual construction. Instead of being flat or saw-toothed the roof is a series of curved glass hoods to let in the maximum amount of daylight for the hundred or so regular employees.

The lower floor is devoted to warehousing and shipping of incoming paper in rolls and of the finished paper bags. The Los Angeles Railway Company spur runs along the east side of the building,

providing car to door loading facilities. The west side of the building is on a side street which provides truck loading and unloading facilities.

● Also on the main floor is the paste making department equipped with three paste making machines. Each has a capacity of 350 gallons and the average daily production of the department is about 500 gallons. Vegetable glue is produced and the production of the paste department can be increased when necessary.

The upper floor contains the bag making and printing departments. There is a complete range of bag making machinery, including both large and small machines. Of interest in connection with the bag making machines is the use of photo electric cells to keep the web of paper in proper alignment and prevent slippage. In this same department are combining and tin-tie machines for use on coffee bags.

● In the printing department there are rotary suction presses for separate printing, Blumer presses of Avery design, a Chambon press, small platen presses and a large millinery bag press. There are also cutters and two rewinders.

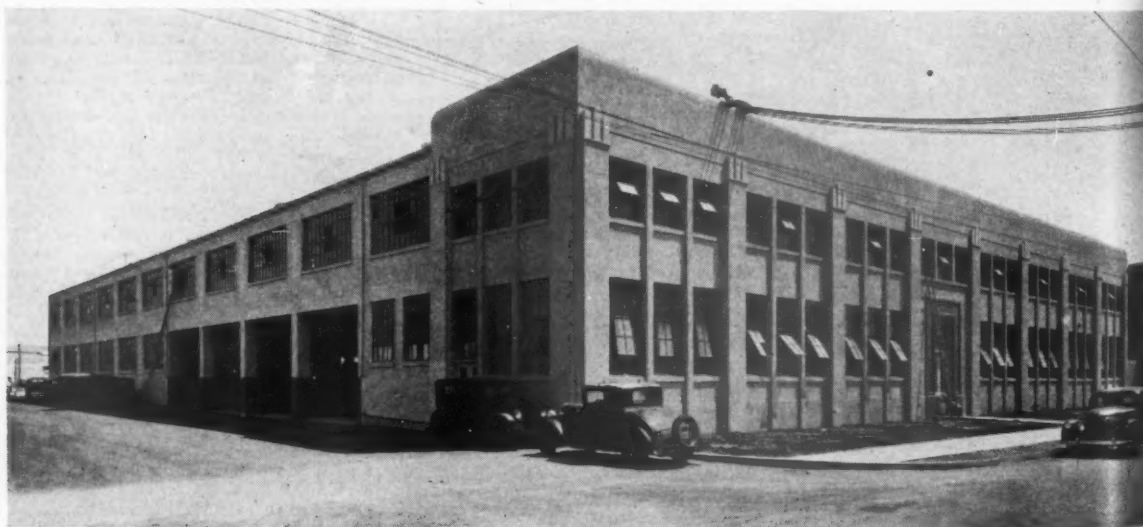
The resident manager of the Union Bag and Paper Corporation's



**G. S. BRENZEL, Resident
Manager, UNION BAG & PAPER
CORPORATION, Los Angeles**

Los Angeles plant is G. S. Brenzel, who was previously manager of the company's Vancouver, Washington, bag plant.

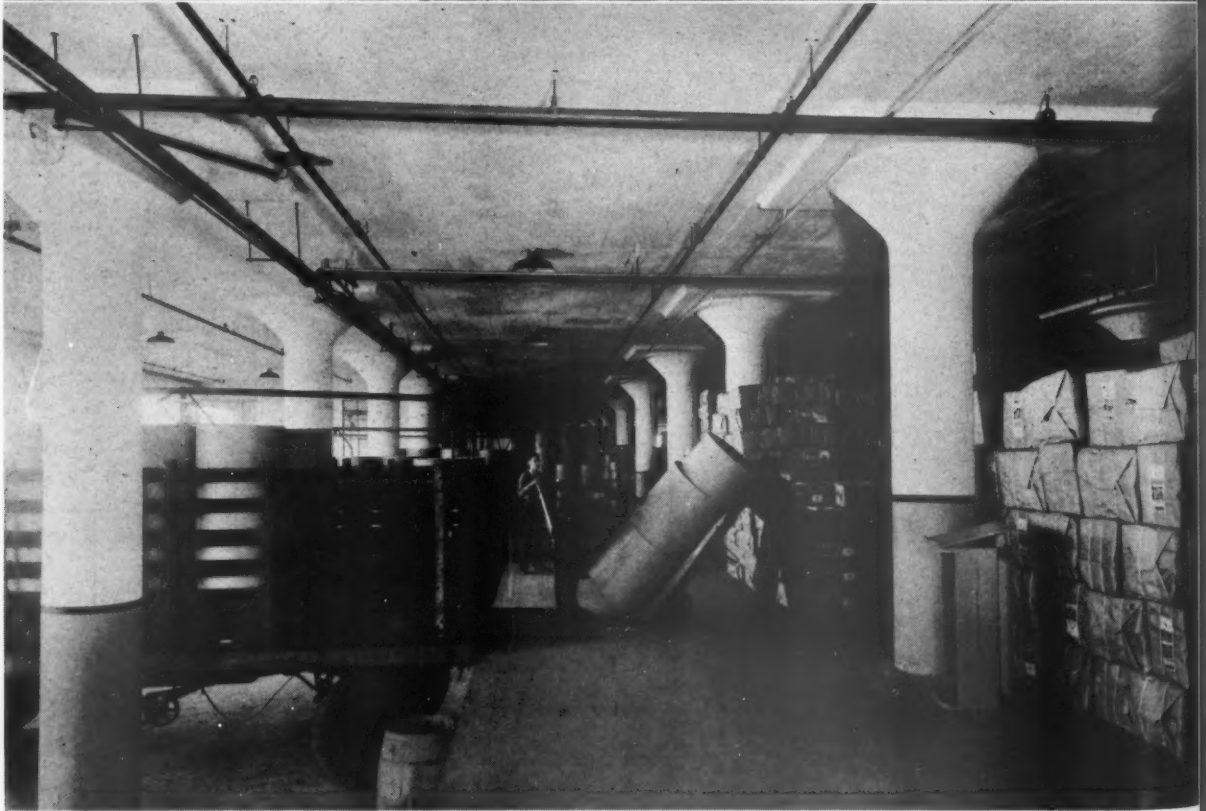
● This is the second new plant of the Union Bag and Paper Corporation in recent years. Their new pulp and paper mill at Savannah, Georgia, is now complete, the third unit being put into production this past fall.



UNION BAG & PAPER CORPORATION'S new bag factory in Los Angeles.



UNION BAG'S large battery of bag making machines in the new Los Angeles plant.



At the top appears part of the bag printing department and below is a portion of the shipping and receiving department at the UNION BAG & PAPER CORPORATION'S new Los Angeles plant.

The Japanese Pulp Situation

Plans for expansion of domestic pulp production—Summary of third quarter 1937 report on pulp and paper production, imports and exports, by CARL H. BOEHRINGER, Assistant Trade Commissioner, U. S. Department of Commerce, Tokyo*

PRODUCTION of wood pulp in Japan proper, Hokkaido and Karafuto (Japanese Saghalien), during the third quarter of 1937 aggregated 442,374,000 pounds or 221,182 short tons, exceeding the total produced in the preceding quarter by 2.8 per cent. Compared with the output during the third quarter of 1936, however, there was a gain of 18.1 per cent for the 1937 period.

Table I summarizes wood pulp production in the areas mentioned during the third quarters of 1936 and 1937, as reported by the Japan Paper Manufacturers' Association. Data covering wood pulp output in Chosen (Korea) are not available on a monthly basis.

Largest Quarterly Production

● Wood pulp production during the period under review was the largest ever reported for any calendar quarter, as shown by the data in Table II which summarizes output by quarters during the years 1935 and 1936 and during the first nine months of 1937.

According to this data the average production per quarter during the first nine months of 1937 was 9.4 per cent greater than the corresponding average for the year 1936. Compared with the average production per quarter in 1935, however, the gain amounts to 17.4 per cent.

Imports of Pulp

● Imports of wood pulp into Japan during the third quarter of 1937 included 76,348 long tons of rayon pulp and 53,976 tons of paper pulp, the total of 130,324 tons gaining 4 per cent over the preceding quarter but fully 50 per cent greater than imports made during the 1936 third quarter. Table III details imports of wood pulp by quarters during the year 1936 and during the first nine months of 1937.

Arrivals of wood pulp during the first nine months of 1937 aggregated 335,922 long tons, an increase of 40 per cent when compared with corresponding imports in 1936 and 61 per cent greater than imports during the same period of 1935. Table IV gives import details.

Imports from U. S. in 1937

● Imports from the United States during the first nine months of 1937 were 135,284 long tons, an increase of 15 per cent when compared with imports from

the United States during the same period of 1936, and 65 per cent greater than arrivals during the first nine months of 1935.

The trend of imports from the United States as well as total imports is depicted in Table V, summarizing these imports during the first nine months of the years 1928 to 1937 inclusive as reported in the official monthly trade return. The volume is given in terms of 100 kin, equal to 132.2772 pounds or 60 kilograms.

Exports of Pulp From Japan

● Exports of wood pulp from Japan during the first nine months of 1937 amounted to 2,594 long tons valued at 511,379 yen, compared with corresponding shipments of 531 long tons valued at 78,352 yen during the same period of 1936.

Prices for Domestic and Imported Pulp

● Pulp prices in Japan continued to advance. In our previous reports, the average monthly quotations for domestic bleached sulphite paper pulp were given, as reported by the Oji Paper Manufacturing Company and published in the monthly trade journal of the Japan Paper Manufacturers' Association. Since June, however, publication of these data has been stopped, this action being accompanied by a notice in the trade journals to the effect that since no domestic

bleached sulphite paper pulp was available on the open market there obviously was no need for market quotations. In the event that publication of these prices are resumed, they will be incorporated in these quarterly reports.

Table VI shows the average monthly quotations for domestic unbleached paper pulp during the years 1935 and 1936 and during the first nine months of 1937, as reported by the Oji Paper Manufacturing Company.

An indication as to the prices for imported pulp may be secured from Table VII showing average monthly quotations for paper and rayon pulp during the years 1935 and 1936 and during the first nine months of 1937, as reported in the monthly trade journal of the Japan Paper Manufacturers' Association. It will be noted that paper pulp prices have advanced to a much greater degree than have prices for rayon pulp.

Quotas for 1937 and 1938 Pulp Imports

● As previously reported, imports of wood pulp are being restricted by the Finance Ministry which has charge of enforcing the Exchange Control Law. Paper pulp imports during 1937 are being restricted to 250,000 metric tons but it is now obvious (this report was written December 7, 1937) that this figure will not be reached since arrivals during the first 10 months of this year total only 161,886 metric tons. Accordingly, it is reported

Although Japan has become the largest export customer of the American wood pulp industry, knowledge in the United States of Japanese pulp, paper, rayon, staple fiber and cellophane industries has been both fragmentary and contradictory.

With the growth of pulp exports to Japan the United States Department of Commerce has endeavored to assemble accurate information of a background and reference nature in addition to extending the range of current statistical data. The purpose is to enable American producers of wood pulp, paper, rayon and staple fiber to adjust their own policies when necessary upon a basis of accurate information concerning these Japanese industries.

Mr. Boehringer's report for the third quarter of 1937 includes much useful information on Japanese conditions and plans for future development.

*Published by permission of the Forest Products Division (Phillips A. Hayward, Chief) Bureau of Foreign & Domestic Commerce, U. S. Department of Commerce, Washington, D. C.

Table I
Chemical & Mechanical Wood Pulp Production*
(In 1,000 Pounds)

Month—	Third Quarter, 1936			Third Quarter, 1937		
	Chemical	Mech'cal	Total	Chemical	Mech'cal	Total
July	63,713	58,060	121,773	80,120	65,479	145,599
August	66,283	61,659	127,942	82,612	66,233	148,845
Sept.	63,075	62,486	125,560	81,825	66,105	147,930
Total	193,070	182,205	375,275	244,557	197,817	442,375

*Includes output in Japan Proper, Hokkaido and Karafuto (Japanese Saghalien).

Table II
Summary, Chemical and Mechanical Wood Pulp Production*
(In 1,000 Pounds)

1935		Chemical	Mechanical	Total
1st Quarter		178,984	163,320	342,304
2nd Quarter		185,039	174,581	359,620
3rd Quarter		187,395	174,107	361,502
4th Quarter		183,699	173,051	356,750
Average per quarter		183,779	171,265	355,044
1936				
1st Quarter		186,002	167,473	353,475
2nd Quarter		193,880	183,547	377,427
3rd Quarter		193,070	182,205	375,275
4th Quarter		196,277	186,751	383,028
Average per quarter		192,307	179,494	372,301
1937				
1st Quarter		193,804	185,269	379,073
2nd Quarter		233,607	196,566	430,173
3rd Quarter		244,557	197,817	442,374
Average per quarter		223,990	193,217	417,207

*Includes output in Japan Proper, Hokkaido and Karafuto (Japanese Saghalien).

Table III
Summary, Imports of Rayon & Paper Pulp, Japan
(In Long Tons)

1936		Rayon	Paper	Total	Total Value, Yen
1st Quarter		34,308	44,715	79,023	15,298,436
2nd Quarter		39,087	34,983	74,070	15,109,284
3rd Quarter		45,469	41,392	86,861	17,756,049
4th Quarter		50,505	36,012	86,517	18,943,288
Average per quarter		42,342	39,275	81,618	16,776,764
1937					
1st Quarter		45,530	34,877	80,407	18,176,034
2nd Quarter		72,601	52,492	125,093	29,901,538
3rd Quarter		76,348	53,976	130,324	33,070,373
Average per quarter		64,827	47,114	111,941	27,049,315

Table IV
Imports, Japan, Wood Pulp, First 9 Months 1935-37
(In Long Tons)

	9 Mos. 1935	9 Mos. 1936	9 Mos. 1937
Paper Pulp	108,760	121,090	141,344
Rayon Pulp	98,747	118,866	194,578
Total	207,507	239,956	335,922
Per Cent from:			
United States	39.4	46.4	40.3
Sweden	17.0	17.0	27.0
Norway	17.0	15.9	13.1
Canada	16.1	8.1	11.2
Others	10.5	12.6	8.4

Table V
Imports, Wood Pulp, from U. S. A. & Total Imports First Nine Months, 1928-37
(Volume in 100 Kin — Value in Yen)

9 Months	From the U.S.A.		Total Imports	
	Volume	Value	Volume	Value
1928	66,306	759,501	935,420	8,422,848
1929	221,762	2,099,427	1,055,601	10,441,580
1930	67,874	662,399	1,001,842	9,216,115
1931	262,012	1,771,153	1,304,034	9,290,673
1932	281,653	2,747,019	1,386,876	11,776,384
1933	519,896	5,448,486	2,026,112	20,136,132
1934	886,372	10,165,442	2,631,072	30,135,165
1935	1,383,874	17,472,385	3,513,952	42,792,788
1936	1,983,269	23,765,881	4,063,436	48,163,769
1937	2,290,917	34,351,347	5,688,555	81,147,945
Average	796,394	9,924,304	2,360,690	27,152,340

that the quota for 1938 will be drastically reduced although final decision on the matter is yet to be announced. (Early in February, 1938, the quota for the year remained unannounced.—Ed.) Some ideas as to the possible line of developments, however, is afforded by a report released by the Okuyama News Service, Tokyo, on November 18, 1937. According to this report, the Paper Pulp Trade Association petitioned the Ministry of Commerce and Industry for an alleviation of the import restrictions on paper pulp for 1938. The petition was submitted on the strength of reports current to the effect that the ministry was considering the limiting of imports of paper pulp during 1938 to only 100,000 metric tons (metric ton, 2204.6 pounds), or 110,230 short tons. The association estimates requirements from abroad during 1938 at 200,000 metric tons, a total that will closely approximate arrivals during 1937.

According to this report, the Ministry of Commerce and Industry takes the view that the restriction of raw materials, although not to be welcomed from the industrial standpoint, is a prerequisite condition for the adjustment of international payments. As an additional measure to cope with the situation, the ministry is said to favor control over the consumption of foreign style or machine made papers. Reports have appeared since then to indicate that various government offices here are taking steps to curtail the use of paper while department and other stores are likewise reported to be studying schemes aiming at the use of less paper or thinner and cheaper grades of paper for wrapping purposes.

● As previously pointed out, the amount of rayon pulp permitted importation during 1937 was originally placed at 300,000 metric tons, this total presumably being increased to 330,000 metric tons although some doubt on this point appears to be justified. Rayon pulp imports during the first 10 months of 1937 reached 233,532 metric tons and possibly might equal 300,000 metric tons for the entire year. It does not seem likely, however, that arrivals in 1937 will approximate 330,000 metric tons.

Early in September, a report in the "Osaka Mainichi & Tokyo Nichi Nichi" stated that the Commerce and Industry Ministry had refused permission to import 40,000 metric tons of rayon pulp during the balance of this year. The Government authorities concerned, however, were said then to be studying measures to adjust the rayon pulp supply and demand conditions. In order to prevent soaring of pulp prices, as a result of shortage of supply, the authorities ordered the rayon pulp control council to adjust the partial accumulation of pulp holdings of some large companies. These companies were said to have sufficient pulp holdings for six months' operation. Transfer of some quantity of these holdings to smaller companies, which did not have stock sufficient for even one month of operation, was desired. Further, to encourage the staple fiber industry, the Commerce and Industry Ministry asked the rayon pulp control council to give preference to the staple fiber producers in connection with the allotment of pulp stocks.

● As reported, on September 3, 1937, paper and rayon pulp importers made formal application for permission to import a total of 734,000 metric tons of pulp during 1938, including 334,000 tons

Japanese wood pulp production in the third quarter of 1937 was the largest quarterly production of record.

Japanese wood pulp imports in the third quarter of 1937 were 4 per cent above the second quarter but 50 per cent larger than the third quarter of 1936.

of paper pulp and 400,000 tons of rayon pulp. The application for paper pulp imports appears to be excessively large and unwarranted by consumptive demand.

No decision with regard to the amount of rayon pulp for rayon manufacture to be permitted importation during 1938 has yet been reached although discussions have been conducted during the past several months. According to press reports published in early November, however, it appears that rayon producers expect the Government to permit the importation of 220,000 metric tons of such pulp during 1938. This figure, if finally approved, as well as the figure of 159,000 tons for staple fiber manufacture, may be revised from time to time as market conditions demand.

● It may be added that representatives of Japanese cellophane producers late in September formed a society by the name of Nippon Cellophane Kogyo Dogyo Kai, which may be translated to read the Japanese Cellophane Manufacturers Association. Through this organ, the traders will join with the rayon manufacturers, for collective importation of rayon pulp at 15,000 metric tons for 1938. Consumption of rayon pulp by cellophane manufacturers in 1934 is estimated to have totalled only 4,290 long tons.

Stricter Control

All information available points to stricter control over imports and consumption of paper and rayon pulp. Representative of reports appearing in the local press is the following news item released by the Okuyama News Service, Tokyo, on November 4, 1937, the information being based upon reports appearing in the vernacular press:

"With the 1937 imports of pulp coming to a close with the transactions for October deliveries, the Ministry of Commerce and Industry is reported planning to operate a strict control over the distribution of imported pulp in addition to the control now being exercised over futures transactions. Under the new system now under consideration, the Bureau of Foreign Trade and the Bureau of Industry of the Ministry will cooperate in the work of deciding upon the total import quota for the year on the basis of the estimated stocks, estimated requirements and other necessary items to be reported by various private controlling organs.

"In this connection, the organization of a new distribution controlling organ by the rayon and paper pulp import organizations is being urged. It is learned that the Commerce and Industry Ministry is planning to give priority to rayon pulp over paper pulp in deciding import quotas."

● As indication as to methods being adopted by industry to control pulp consumption is afforded by the following ac-

count of the activities of the State Fiber Association, as reported by the "Japan Times & Mail," Tokyo, in issue dated October 26, 1937:

"The Staple Fiber Association, at its extraordinary general meeting Monday, approved a draft plan formulated by its committee with regard to control of pulp for the next year.

"The salient points of the draft may be given as follows:

"1. All the members of the Staple Fiber Association shall make application in respect to the respective volume of pulp required for the next year, and at the same time they shall pay an application control fee of 2 sen per pound.

"2. All the members are authorized to conclude respectively a purchase contract within the limits of the foregoing volume. In case of conclusion of the contract, they shall submit a report on contract volume and pay a contract control fee of 1 sen per pound.

"3. After the inspection of the respective actual production by the member companies of staple fiber, the application and contract control fees mentioned above shall be paid back.

"4. Those who use pulp other than wood pulp can be exempted from control fees, when they obtain an approval from the committee of the Staple Fiber Association."

Development of Japan's National Pulp Policy

● The following comments supplement those contained on pages 66 to 70 of Special Report No. 46 dated September 10, 1937, entitled "A Critical Survey of the Japanese Pulp Industry." They also supplement various Economic and Trade Notes submitted since that report was prepared.

Economic and Trade Note No. 182 dated September 25, 1937, entitled "Details of Japan's Five Year Increased Pulp Production Program," summarized the official Japanese policy towards increased pulp production as drafted by the Minister of Commerce and Industry in early September. More up-to-date information relative to this official plan is contained in the following report released by the Okuyama News Service, Tokyo, on September 25, 1937:

The Ministry of Commerce and Industry has decided upon the final five-

year pulp production plan following negotiations with the other ministries concerned. The Government authorities, including leaders of the Planning Board, will meet during October to give the finishing touches to the plan. Experts of the Commerce Ministry decline to disclose any details but it is understood that the Commerce Ministry's plan has been drafted on the basis of the following points:

1. The total pulp supply in Japan and "Manchukuo" will reach 1,950,000 metric tons in five years.
2. Of the total supply, about 30 per cent or 560,000 to 570,000 metric tons will be rayon pulp.
3. Production of pulp from bagasse in Formosa will amount to 100,000 metric tons in five years.
4. Efforts will be made to check the imports of foreign timber by increasing the timber production in Saghalien, "Manchukuo" and Japan Proper.
5. In order to encourage the increased production of timber, the Government's reforestation plan and the forestry administration will be re-considered and re-studied for further improvement.
6. Various promotion measures will be considered in parallel with the encouragement measure by the semi-Government companies from the "national policy" standpoint.

While minor revision may be made, the plan is expected to be approved at the forthcoming joint-Ministerial conference.

● The foregoing report refers to the hope of having pulp production total 1,950,000 metric tons by 1942. Previous and subsequent reports, however, place this total at 1,800,000 tons. Supplemental to the above report is the following account published by the "Osaka Mainichi & Tokyo Nichi Nichi," of Osaka on October 19, 1937:

"The possibility of the Commerce Office's plan to realize Japan's self-sufficiency in pulp for paper manufacturing and rayon and staple fiber production, estimating the demand for 1942 at 1,800,000 tons, has greatly decreased due to strong opposition by the Agriculture Office and the Overseas Office to the scheme of increasing the annual lumber output in Hokkaido and Karafuto (Japanese Saghalien).

"Since the Finance Office and Commerce Office have decided their policy of restricting the import of pulp for rayon and encouraging the use of staple fiber as a substitute for wool and rayon, the deadlock of the Commerce Office's plan to increase the domestic supply of pulp will greatly affect the paper and staple fiber business.

"When the Commerce authorities opened negotiations with the Agriculture Office, the Overseas Office and the reforestation authorities of the Hokkaido and Karafuto governments, strong opposition was voiced by these reforestation authori-

Imports of wood pulp by Japan from United States pulp mills were 15 per cent greater in the first nine months of 1937 than in the same 1936 period, and 65 per cent greater than in the first nine months of 1935.

ties since the increase of lumber output will greatly affect the forestation programs in Hokkaido and Karafuto, and they referred the matter to the Kikakucho (Planning Board) of the Cabinet.

"The Kikakucho has held three conferences since to scrutinize the question, receiving the data from these four offices of the Cabinet. This time opinions were divided among the investigators of the Kikakucho as some of them represented the Commerce Office while others represented the Agriculture Office and the Overseas Offices.

"The investigators from the Commerce Office and the Finance Office supported the Commerce Office's plan for the view of importing Japan's international accounts and promoting Japan's staple fiber industry. The investigators from the Agriculture Office and the Overseas Office opposed the scheme in consideration of protecting the forests from the increased lumbering, declaring that there is no more room for deforestation.

"It will take some time to reach an amicable solution of the problem, because both sides show an adamant attitude. Business circles are watching developments of the dispute with keen attention."

Amplification of the foregoing development is contained in the following report published by the "Japan Advertiser," Tokyo, on November 6, 1937, based upon an account which appeared originally in the vernacular "Hechi Shimbun," Japanese daily published at Tokyo.

"The problem of meeting the increasing demand for pulp without further dislocating the balance of international payments has been taken up by the Planning Board, which is seeking a solution in cooperation with the Commerce and Industry, Finance, Home and Overseas ministries.

"The Oji Paper Manufacturing Company is now manufacturing pulp from lumber cut in Saghalien and the Hokkaido, but the output is far too small to meet the demand. Most of the supply is imported.

● "Staple fiber has become favorite in Japan as a substitute for wool and cotton, of which imports have been restricted. If the anticipated increase in demand for staple fiber is taken into account, it is estimated that 150,000,000 yen worth of imported pulp will be needed next year. As Japan cannot afford to pay such a large amount for imports at this time, it must make itself as nearly self-sufficient as possible.

"If next year's production is to be increased, it is necessary that trees be felled during the remaining months of this year. However, lumbering is difficult during the winter and, furthermore, the Saghalien and the Hokkaido governments are rather opposed to an increase in the rate of felling. The Planning Board is expected to examine closely the objections of the two governments.

"It is contended that Oji Paper is felling a large number of trees in the two areas and that further activities would prove disadvantageous to the forestry policy.

"The board suggests that flooding consequent upon the felling of trees can be prevented by proper methods with part of the money raised from selling the timber and that flood prevention depends upon technique. On this basis,

Table VI
Average Monthly Quotations — Domestic Sulphite Paper Pulp — Unbleached
(In Yen Per Pound, Ex Warehouse Yokohama)

Month	1934	1935	1936	1937
January	0.072	0.082	0.075	0.110
February	0.072	0.082	0.075	0.120
March	0.072	0.082	0.075	0.120
April	0.082	0.082	0.075	0.135
May	0.082	0.080	0.075	0.140
June	0.082	0.080	0.075	0.140
July	0.082	0.080	0.077	0.145
August	0.082	0.080	0.077	0.145
September	0.082	0.080	0.077	0.150
October	0.082	0.080	0.085	—
November	0.082	0.080	0.090	—
December	0.082	0.080	0.090	—
Average	0.795	0.0808	0.0788	0.1339

Table VII
Average Monthly Quotations for Imported Pulp
(In Yen Per Pound)

Month	Paper Pulp Prices			Rayon Pulp Prices		
	1935	1936	1937	1935	1936	1937
January	0.067	0.062	0.074	0.120	0.115	0.116
February	0.067	0.062	0.072	0.120	0.115	0.117
March	0.067	0.062	0.077	0.120	0.115	0.117
April	0.067	0.062	0.077	0.120	0.116	0.118
May	0.067	0.062	0.080	0.120	0.115	0.118
June	0.066	0.062	0.083	0.119	0.115	0.119
July	0.066	0.062	0.084	0.119	0.115	0.119
August	0.066	0.062	0.087	0.119	0.115	0.119
September	0.065	0.062	0.089	0.119	0.115	0.119
October	0.065	0.064	—	0.119	0.115	—
November	0.065	0.064	—	0.119	0.115	—
December	0.065	0.064	—	0.119	0.118	—
Average	0.066	0.0625	0.0803	0.1194	0.1153	0.118

Table VIII
Paper Production & Sales, Japan, Third Quarter, 1936-37
(In 1,000 Pounds)

	Production		Sales	
	1936	1937	1936	1937
Superior Printing	37,499	42,293	35,860	29,143
Ordinary Printing	50,510	70,514	43,589	53,546
Writing & Drawing	14,934	22,221	14,882	14,226
Simili	30,581	44,047	28,087	28,863
Art & Chrome	10,278	12,069	9,156	9,591
Newsprint	196,461	211,521	194,346	202,802
Roll & Toilet	11,710	10,020	12,368	7,138
Colored	2,880	3,239	2,677	2,624
Packing	57,826	70,130	58,783	58,164
Japanese Machine-Made	6,466	10,130	8,872	8,525
Cardboard	21,208	26,962	20,638	24,271
Miscellaneous	16,926	30,225	17,382	28,687
Total	457,281	553,549	451,640	467,580

Table IX
Imports, Japan, Paper, Third Quarter, 1936-37
(Volume in 100 Kin — Value in Yen)

	3rd Quarter, 1936		3rd Quarter, 1937	
	Volume	Value	Volume	Value
Printing Paper:				
Art Paper	51	955	162	12,252
Other, Colored	2,152	36,043	2,099	45,924
Newsprint*	302,222	2,316,155	264,392	3,590,627
Other	4,905	201,890	3,835	107,372
Total	309,330	2,555,043	270,488	3,756,175
Other Paper:				
Writing	2,744	87,675	3,064	118,267
Drawing	362	38,658	182	20,632
Packing & Match Paper	22,977	351,510	26,060	470,491
Wall Paper	46	8,046	87	16,676
Pasteboard	3,287	136,852	1,560	68,599
Imitation Japanese	4,703	159,978	3,887	279,107
Imitation Parchment	18,938	542,310	24,634	746,994
Total	53,057	1,325,029	59,474	1,720,766
Grand Total	362,387	3,880,072	329,962	5,476,941

*Designated as "Printing Paper: weighing not more than 58 grams per square meter."

the board vigorously insists that the number of trees cut should be increased to meet the urgent demand for more pulp.

"Beech also will be used for the manufacture of pulp. These trees are abundantly produced in the Tohoku district, northeast of Tokyo on the main island of Honshu. The Commerce and Industry and Agriculture and Forestry ministries have caused the Tohoku Development Company and the Oji Paper Manufacturing Company to cooperate in the use of beech. Hitherto, Oji Paper has been using silver fir."

● In a subsequent section of this report, announcement is made of the projected establishment of a joint company by the Oji Paper Manufacturing Company and the Tohoku Development Company. More information relative to the activities of the Planning Board to solve Japan's pulp problem is given in the following account published by the "Japan Times & Mail," Tokyo, on December 8, 1937, under the heading "Large Scale Pulp Concern Proposed by Government — Oji Paper May Be Excluded from New Company to Avoid Monopoly."

"Preparation by the Planning Board to establish a new large-scale pulp manufacturing company are now under way. It is understood that the planned company will use needle leaf trees in Hokkaido Prefecture as raw material for pulp to make rayon yarns.

"The new corporation will be capitalized at 100,000,000 yen. Among the shareholders will be included rayon and staple fiber manufacturing companies and paper manufacturing companies. In other words, Kanegafuchi Spinning, Toyo Spinning, Nippon Rayon, Mitsubishi Paper Manufacturing and Hokuryetsu Paper Manufacturing companies and others will invest in the proposed corporation.

"There are many indications that the Government authorities, in order to avoid monopolistic trend, may not permit participation of the Oji Paper Manufacturing Company."

The foregoing is the latest available relative to the Government's interest in increasing pulp production in this country along the lines indicated.

New Pulp Mills And Expansions

● In our report entitled "A Critical Survey of the Japanese Pulp Industry," page 48-49, a summary was given of the position obtaining in September, 1937, with regard to new mills under construction. A report released on September 3 by a news service was quoted to the effect that at that time there were fully 23 projects on record involving output of 393,230 metric tons a year. However, opinion from qualified quarters was secured, indicating that only about seven of these projects, involving 122,000 metric tons of wood pulp a year, could definitely be considered as sure to materialize.

The following sections supplement or amend previous reports submitted by this office relative to new pulp making companies, plant extensions and the like in various parts of the Japanese Empire and in "Manchukuo."

Pulp Developments in Japan Proper

● On September 1, 1937, the Okuyama News Service, Tokyo, reported that plans for the establishment of a new pulp making company were being drafted by a group led by the Mitsubishi Paper Company. According to plans, the projected company is to be capitalized at between 10,000,000 and 20,000,000 yen and will make about 20,000 metric tons of rayon and paper pulp from timber supplies from domestic and foreign sources. The site of a plant for the projected company was tentatively decided to be at Shinminato, Toyama Prefecture. The report concluded with the statement that the Mitsubishi interests have become greatly interested in pulp projects since they purchased the Manchou Pulp Kogyo Kabushiki Kaisha (Manchou Pulp Industry Co., Ltd.) some time ago. The foregoing report was confirmed by the Daily Industrial News Service, Tokyo, in a release dated September 4, 1937, which added that the projected company would be formed mainly through extension of the existing Mitsubishi Paper Company.

The Daily Industrial News Service on September 15, 1937, reported that the

Showa Seishi Kabushiki Kaisha (Showa Paper Mfg. Co., Ltd.) is planning to take up the manufacture of wood pulp, the raw material to be supplied from acquired holdings near Yamanashi. The mill will be placed near Sugukawa Station on the Tokaido Railway. The company plans to make 10,000 tons of ground pulp a year.

The Okuyama News Service, Tokyo, on September 4, 1937, stated that the Asahi Electric Chemical Industry Company recently completed the expansion of its pulp manufacturing facilities at its Oku plant. The new facilities are scheduled to be operated in the near future, trebling the pulp productive capacity of the company to 20 metric tons daily or about 7,000 metric tons a year. A part of the annual output is arranged to be delivered to the Government Printing Office.

The "Commercial Daily Report," Tokyo, on November 1, 1937, reported that the Toyo Spinning Co., Ltd., capitalized at 72,750,000 yen fully paid, of Osaka, is enlarging its staple fiber mills at Iwakuni, Yamaguchi Prefecture, and at Tsuruga, Fukui Prefecture, and lately bought land in Gifu Prefecture for a site on which to build a factory to make pulp for staple fiber manufacturing. The

Table X

Imports, Japan, Printing Paper, Third Quarter, 1936-37
(Volume in 100 Kin — Value in Yen)

From:	3rd Quarter, 1936		3rd Quarter, 1937	
	Volume	Value	Volume	Value
Great Britain	4,252	106,418	6,779	171,739
Germany	367	5,541	12,737	164,758
Switzerland				
Netherlands	186	4,482	1,561	22,239
Sweden	9,325	78,989	17,585	257,366
Norway	10,134	87,116	18,073	216,422
United States	3,477	28,182	3,533	35,583
Canada	278,568	2,103,236	203,947	2,777,897
Other	3,021	141,079	6,273	110,171
Total	309,330	2,555,043	270,488	3,756,175

Note: 100 kin equals 132.2772 pounds or 60 kilograms.
Source: Official Monthly Trade Return of Japan.

Table XI

Exports, Paper, Japan, Third Quarter, 1936-37
(Volume in 100 Kin — Value in Yen)

	3rd Quarter, 1936		3rd Quarter, 1937	
	Volume	Value	Volume	Value
Art Paper			12,849	310,819
Newsprint			53,085	691,831
Other Printing Paper	140,914	1,883,384	77,013	1,487,992
Drawing Paper	†	†	513	17,816
Writing Paper	†	†	1,386	33,504
Filter Paper	†	†	175	23,161
Cigarette Paper	26,826	1,447,409	17,643	1,191,240
"Ganpi" & "Usuyo"	2,488	224,647	3,181	346,732
"Yoshino" & "Tengucho"	685	137,191	1,389	196,832
"Torinoko"	69	9,251	79	10,291
"Renshi"	1,713	21,732	1,077	16,159
"Hanshi" & "Mino"	4,777	254,162	6,605	316,953
"Yakigami"	†	†	35,466	354,907
Pasteboard	92,351	645,884	122,467	1,114,592
Packing Paper	19,105	347,784	13,537	364,672
Toilet Paper	24,341	355,769	15,004	379,227
Wall Paper	2,210	63,162	1,396	76,703
Imitation Japanese	41,681	648,885	54,665	1,092,548
Other Paper	73,673	922,995	36,040	801,574
Total	430,833	6,962,255	453,470	8,827,543

†Not reported separately prior to 1937.

Note: 100 kin equals 132.2772 pounds or 60 kilograms.
Source: Official Monthly Trade Return of Japan.

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cost of enlargement and construction of the pulp mill is estimated at 6,700,000 yen.

Formal organization of the Fukoku Jinken Pulp Kogyo Kabushiki Kaisha (Fukoku Rayon Pulp Industry Co., Ltd.) was made on November 1, 1937, at Osaka. Of the authorized capital of 10,000,000 yen one quarter is paid up. The company is trying to buy land at Kasamatsu, near Ichinomiya, for the site on which to build its mills. Central figure in this company is the Itochu Shoji Kabushiki Kaisha (Itochu Trading Co., Ltd.). As previously reported, this pulp firm hoped originally to make paper pulp from rice hulls, eventual output to approximate 50,000 tons a year. The latest reports available indicate that pulp for staple fiber manufacturing may also be made but no details were released.

• The Oji Paper Manufacturing Company figured in several developments in recent months. On September 8, 1937, it was reported that this firm decided to establish an affiliate to take charge of the reforestation activities of the concern. The new firm is to be named the Oji Reforestation Co., Ltd., (Oji Zorin Kabushiki Kaisha) and will be capitalized at 10,000,000 yen half paid up. It will engage in reforestation activities and will also take charge of the sale and purchase of timber. The report concluded with the statement that: "With the nation confronted with a pulp famine, the birth of a reforestation company to attend to the smoother supply of pulp materials is focussing keen attention of the paper and pulp circles."

On October 1, 1937, the Daily Industrial News Service, Tokyo, reported that the Oji Paper Company, following the establishment of the firm mentioned in the preceding paragraph, will take another definite step toward development of wood supplies. Establishment of another subsidiary is contemplated with a capital of probably 20,000,000 yen. The proposed company will carry on afforestation in South Sea countries. The report concluded with the observation that in these areas it has been found that trees attain in 10 years sufficient growth for pulp making.

On November 4, 1937, it was reported that the Oji Paper Manufacturing Company had informally decided to organize a new pulp company in the Tohoku district (northeast of Tokyo), Japan Proper, with a capital of 10,000,000 yen. Full details were not released but it was reported that the new firm will aim at producing 20,000 metric tons of pulp annually from red pine available in the Tohoku district. The site of the new plant is likely to be placed either at Ichinoseki or Midzusawa in Iwate Prefecture. It was added that the new company is scheduled to come into being by the end of 1937 or early in 1938.

• The foregoing report was confirmed by the "Japan Advertiser," Tokyo, on November 5, 1937. It was additionally reported that the name of the new firm will be Tohoku Pulp Company, Ltd. More information relative to this development was released by the "Japan Times & Mail," Tokyo, on November 8, 1937, indicating that the scope of operations will probably be much larger than was first announced. According to this report, a company will be formed jointly by the Oji Paper Manufacturing Company and the semi-official Tohoku Development Company. Negotiations are

The rapid expansion of rayon production gained world leadership for Japan in 1936 which was maintained in 1937 by a 1 per cent margin over the production in the United States. Staple fiber production has expanded even more rapidly.

Together these industries require increasing tonnage of cellulose. It is natural that Japan should endeavor to develop her own cellulose resources in an effort to prevent pulp imports from rising beyond the difference between the potential maximum domestic production and consumption.

Mr. Boehringer points out the several pulp projects under way and proposed to make Japan less dependent upon imports of wood pulp.

Japan's expansion of cellulose production embraces projects for extraction of cellulose from wood, reeds, soya bean husks, bagasse and banana stalks.

under way between the two companies in connection with the question of investment shares and the board of directors of the proposed concern. While details of the prospectus of the new company are not as yet available, it is so far known, says the report, that the company will be capitalized at 50,000,000 yen and will aim to produce 50,000 tons of pulp a year. It is further stated that the company will set up several pulp mills in Miyagi, Iwate and Akita Prefectures. The company will manufacture chiefly rayon pulp from broad and needle leaf trees which abound in the Tohoku region. The company is expected to be formally established next February. Confirmation of this report was made by Domei, the official Japanese news agency, in a brief release published by local papers on November 9, 1937, and containing the additional information to the effect that the new company is likely to start operations by the end of 1938.

Further details are available relative to the establishment of the Nippon Pulp

Kogyo Kabushiki Kaisha (Japan Pulp Industry Co., Ltd.) previously referred to in our reports as the Nippon Wurtz Kenshi Kabushiki Kaisha (Japan Wurtz Silk Yarn Co., Ltd.), the latter being actually the parent company of the new pulp concern. The Nippon Pulp Kogyo Kabushiki Kaisha is capitalized at 20,000,000 yen paid in 5,000,000 yen, and has its head office at Sonezaki Kami 2-chome, Kita-ku, Osaka. It was organized last June by the firm mentioned above. It is to manufacture 20,000 tons of rayon pulp a year from trees located about Agata-mura. The cost of construction of the factory is estimated at 4,300,000 yen, operations to commence by June, 1938. On November 19, 1937, it was reported that work on the new mill at Agata-mura had commenced. All of the output of 20,000 tons of rayon pulp will be sold to the parent company. It will be remembered that this firm a short time ago was interested in the commercial production of paper pulp from mulberry bark. That scheme was dropped when it was found to be impracticable.

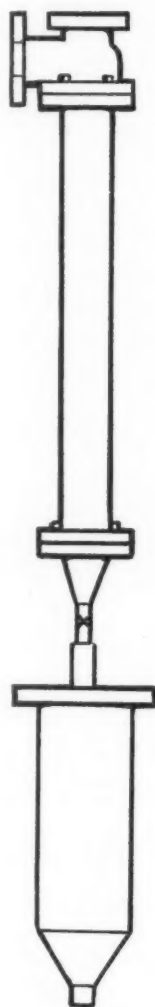
Table XII

Exports, Paper, Japan, Third Quarter, 1936-37
(Volume in 100 Kin — Value in Yen)

	3rd Quarter, 1936		3rd Quarter, 1937	
	Volume	Value	Volume	Value
"Manchukuo"	40,023	704,942	62,547	1,537,338
Kwantung Province	167,278	2,259,722	184,523	3,124,810
China	100,119	2,070,225	40,587	1,158,472
Hong Kong	23,343	299,804	27,834	313,083
British India	46,471	343,644	51,798	450,358
Straits Settlements	6,745	98,899	8,461	178,423
Netherlands Indies	13,912	324,442	21,697	492,338
Asiatic Russia				
Philippine Islands	4,012	71,764	6,237	111,663
Siam	9,156	111,542	18,231	301,421
Great Britain	1,079	137,977	955	199,423
Germany	580	34,450	972	93,043
United States	4,282	219,720	5,425	303,914
Australia	7,838	149,851	20,465	413,830
Others	5,995	135,273	3,738	149,427
Total	430,833	6,962,255	453,470	8,827,543

Note: 100 kin equals 132.2772 pounds or 60 kilograms.
Source: Official Monthly Trade Return of Japan.

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Pulp Developments in Chosen (Korea)

● Two items of interest are available relative to pulp developments in Chosen. On November 12, 1937, it was reported that the Hokusen Seishi Kagaku Kogyo Kabushiki Kaisha (North Chosen Paper and Chemical Industry Co., Ltd.), a subsidiary of the Oji Paper Manufacturing Company, had decided to double its pulp output from 20,000 metric tons, facilities for which were completed in the first production schedule some time ago, to 40,000 metric tons because of the heavy demand for rayon pulp in Japan. The production increase plan is expected to be completed by the fall of 1938.

Having obtained the necessary permission from the Japanese Government, the Kanegafuchi Spinning Company is rushing preparations for the commencement of construction on a reed pulp plant at Shingishu, Chosen, according to a report released by the Okuyama News Service, Tokyo, on November 17, 1937. It is believed that the plant will be so equipped as to produce 10,000 metric tons annually. According to information current in industrial circles, Kanegafuchi plans to establish an independent firm with a capital of 5,000,000 yen to take charge of the Shingishu plant.

Pulp Developments in Taiwan (Formosa)

● Definite strides are being made to increase pulp production from bagasse in Taiwan. During recent months news of several companies planning to engage in this business appeared locally. Most aggressive among the companies planning to make pulp from bagasse in Taiwan is the Ensui Sugar Mfg. Co., Ltd., operating through its subsidiary, the Nippon Sato Kogyo Kabushiki Kaisha (Japan Sugar Industry Co., Ltd.). As last reported, this firm was building a plant at Sensanpi, Taiwan, with an annual productive capacity of 30,000 metric tons of pulp for paper manufacture. In mid-September, it was reported that this firm had decided to erect a second pulp mill at the port town of Karenko, this mill also to have a capacity of 30,000 metric tons of pulp a year. Plans involving the manufacture of paper pulp made from bagasse were also announced.

● At its directors' meeting on October 26, 1937, the Ensui (or Ensuike) Sugar Mfg. Co., Ltd., decided to increase its capital to 60,000,000 yen from the present 29,250,000 yen with a view to expanding its productive facilities, especially for the manufacture of absolute alcohol and pulp from bagasse. Plans were also made providing for the reorganization of its subsidiary, the Nippon Sato Kogyo Kabushiki Kaisha, involving capital increase from 500,000 yen fully paid, to 25,000,000 yen. The plan was adopted at a general meeting of the company held on November 28. At this time, details relative to the pulp making plans of the reorganized Nippon Sato Kogyo Kabushiki Kaisha were released. This company aims to attain an annual production of 30,000 metric tons of pulp in the first stage at the plant at Sensanpi, expected to be ready for operation as from 1939. Upon completion of the first stage, the company will commence work on the second and third stage programs, the second stage involving the annual

production of 30,000 metric tons at the plant to be built at Karenko, the third stage involving annual output of 10,000 tons at a plant to be built at Keishu and 50,000 tons at a plant to be erected at Kotobuki, all in Taiwan.

Previous reports have contained information relative to the establishment of the Taiwan Pulp Kogyo Kabushiki Kaisha (Taiwan Pulp Industry Co., Ltd.) with a capitalization of 10,000,000 yen, quarter paid up, with a plant to be built at Taichu with an annual output capacity of 30,000 tons of pulp for paper manufacture. According to the latest information available, the output capacity is to be 15,000 metric tons instead of 30,000 tons, at least during the first stage of development. The concern will be financed jointly by the Showa Sugar Mfg. Co., Ltd., the Japan Sugar Mfg. Co., Ltd., and the Kanegafuchi Spinning Company. Plants are to be erected at several places in Taiwan, construction work to be started toward the end of 1937 or early in 1938. The plants will be put into operation in the second half of 1939. The latest report concerning this development is dated December 1, 1937, according to which the paid in capital is doubled to 5,000,000 yen. The head office of the new concern is in the Showa Building, Marunouchi, Tokyo. According to the company's prospectus, it will start operation early in December, 1938, and for the first business year will have a profit of 26,000 yen. In the second year it will turn out 7,500 tons, realize a profit of 359,000 yen and pay an 8 per cent dividend. For the third year it will declare a 10 per cent dividend, netting a profit of 1,332,000 yen.

Banana Stalk Pulp

● Mention has been made of efforts to make pulp from banana stalks in Taiwan. Little has been heard of this line of pulp manufacture save two brief reports issued in September. One report indicated that the colonial and industrial bureau of the Taiwan Government-General was then attempting to arouse interest in the commercial production of pulp from banana stalks due to convincing results claimed to have been obtained from laboratory research work. The second report stated that the pulp obtained from this source was good enough to be used for high grade paper and rayon manufacture. A company was mentioned as being formed with a capitalization of 5,000,000 yen in order to launch upon the commercial production of pulp to the extent of 10,000 tons a year.

Pulp Developments in Manchukuo

● News relative to pulp developments in "Manchukuo" is limited to fragmentary reports.

Operation of the various plants of the pulp companies in Manchuria is likely to be delayed, according to a report released by the Okuyama News Service on September 25, 1937. The Toyo Pulp Company, originally scheduled to start test operation of its plant in October, has postponed the opening of its plant until the end of this year. The Nichiman Pulp Co., Ltd., and the Manchou Pulp Industry Co., Ltd., will be compelled to have the start of operations at their plants delayed until March, 1938, or later.

Oji to Make Reed Pulp

The Oji Paper Manufacturing Company has decided to undertake the commercial production of paper pulp from reed available in the Yinkow district in Manchuria, according to a report released by the Okuyama News Service, Tokyo, on October 5, 1937. The experiments conducted by the experts of the paper firm have proved that the production of paper pulp from reed in accordance with a process devised by the company is financially feasible. A concrete plan, being drafted by the Oji concern, calls for the erection of a plant at a total cost of 5,000,000 yen and having an annual output of between 8,000 to 10,000 metric tons. The company is expected to take definite action early in 1938.

In parallel with the pulp expansion program of the Manchukuo Government, the semi-official Oriental Development Company has decided to engage in pulp production by utilizing lumber available in the North Manchurian forestry zone and held by the Chutokairin Koshi, its subsidiary, according to a report dated October 19, 1937. The company's plan calls for the establishment in Manchukuo of an independent pulp company, capitalized at about 10,000,000 yen and aiming at an annual pulp output of 30,000 metric tons in the initial stage. The report concluded with the observation that it is likely that Mitsubishi interests will cooperate in the project.

Pulp From Soya Bean Husks

● Further information is available relative to the plans of the Nichiman Senji Kogyo Kabushiki Kaisha (Japan Manchurian Fiber Industry Co., Ltd.) to make rayon pulp from soya bean husks by the caustic soda process, the method to be adopted for this industry for the first time in Japan and Manchukuo. On October 6, 1937, it was reported that this company, known also as the Manchurian Bean Shell Pulp Company, the Manchou Rayon Pulp Company, and other names, has been granted official permission to build a plant at Kaiyuan. The proposed pulp plant will be designed with an annual production of 10,000 tons during the first period.

Timber From Canada

● The Hokuetsu Paper Company, with mills in Japan Proper, late in September announced that it had been successful in making a contract for the annual supply of 200,000 koku, equal 24,000 M feet, of lumber from Canada over a 10-year period.

Paper Production, Sales and Trade

Domestic Production and Sales

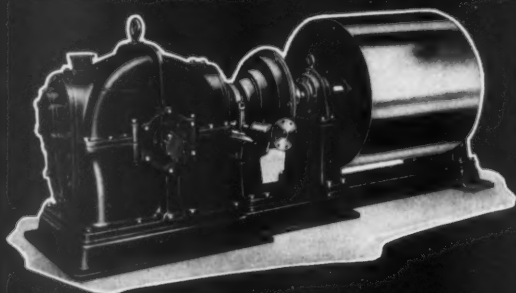
● Production of machine-made paper by members of the Japan Paper Manufacturers' Association during the third quarter of 1937 aggregated 553,549,000 pounds, a decline of 2.1 per cent from the preceding quarter's total but 23 per cent greater than output during the 1936 third quarter. Production during the first nine months of 1937 reached 1,619,278,000 pounds, an increase of 20 per cent from the total produced during the corresponding period in 1936.

Sales during the 1937 third quarter involved 467,580,000, fully 85,969,000 pounds less than the amount produced during that period and 14 per cent below total sales made during the preceding

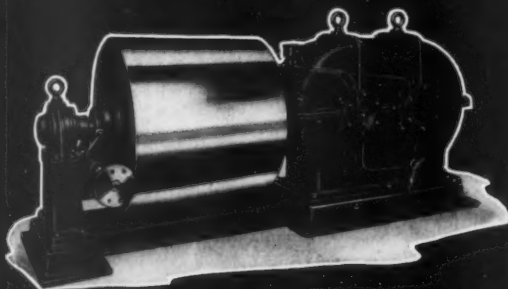
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quarter. Compared with sales made during the 1936 third quarter, there was a decline of 3.4 per cent. Sales during the first nine months of 1937 totalled 1,574,499,000 pounds or 44,779,000 pounds less than the total produced during that period but 17 per cent greater than the amount sold during the first nine months of 1936.

Details covering production and sales of machine-made paper during the third quarter of 1936 and 1937 are given in the following table, as reported by the Japan Paper Manufacturers' Association.

As previously reported, the heavy demand for paper of all sorts in the spring caused the Japan Paper Manufacturers' Association on May 21 to lower the curtailment rate from 27.7 per cent to 10 per cent of capacity, effective June 1 for a 12-month period. Difficulties in China and the intensified control over all branches of trade and industry accompanied by a slackened demand for paper locally are factors which have caused the great disparity between production and sales in recent months. As a result, on October 18 the association voted to make a drastic change in the production restriction figure for November, this figure being upped from 10 to 45 per cent with the possibility that it may even be increased to 50 or 60 per cent before the end of 1937.

Imports of Paper

● Arrivals of paper into Japan during the 1937 third quarter were 43,650,000 pounds at a value of 5,476,941 yen (of which 81 per cent by volume and 70 per cent by value represented printing paper), the volume showing a gain of 48 per cent over the preceding quarter's imports but a decline of almost 10 per cent when compared with the volume imported during the 1936 third quarter.

Imports of paper during the first nine months of 1937 aggregated 100,764,000 pounds with a value of 12,443,773 yen, the volume showing a decline of 48 per cent against corresponding arrivals in 1936 whereas the value gained 7 per cent.

Prohibited Importation of Certain Paper Items

● Imports of paper into Japan are expected to show a sharp decline during the 1937 fourth quarter as a result of the application of the Emergency Trade Control Law put into effect on October 11, 1937. According to this law a large number of products are prohibited further importation, these products including a considerable number of paper items as well as paper manufacturers.

According to a preliminary study the imports of paper and manufactures now restricted during 1935 were valued at 1,503,446 yen and in 1936 at 1,720,171 yen. Imports from the United States during 1935, insofar as could be ascertained, were valued at 659,276 yen.

The kinds of paper and paper manufactures restricted from further importations are those dutiable under the following import tariff items: No. 365, blotting paper; ex-No. 367, match paper; No. 369, wall paper; No. 370, pasteboard or cardboard, excepting that used for matrix making; No. 371, Chinese paper of all kinds; No. 376, oiled paper; No. 377, glass paper for window panes; No. 378, papers, not otherwise provided for (note: see Japanese Import Tariff); No. 379, paper laces and paper borders; No. 380, blank books; No. 382, note paper in boxes; No. 383, envelopes; No. 384,

albums; ex-No. 386, albumized paper and sensitized paper for photographic use; No. 388-2, wallboard; No. 389, labels; No. 390, playing cards; No. 393, card calendars and block calendars; No. 394, picture post cards; No. 395, Christmas cards and the like; No. 401, manufactures of paper or pulp, not otherwise provided for (Note: see Japanese Import Tariff).

Exports of Paper

● Shipments of paper from Japan during the 1937 third quarter aggregated 59,994,000 pounds valued at 8,827,543 yen, these totals showing declines of 20 and 22 per cent respectively when compared with exports made during the preceding quarter. Compared with shipments made during the 1936 third quarter, however, the volume gained 5.2 per cent in contrast to a gain in value of 18 per cent.

Exports during the first nine months of 1937 aggregated 199,824,000 pounds valued at 28,411,895 yen, the volume and value gaining 30 and 49 per cent respectively when compared with shipments made during the corresponding period of 1936.

TAPPI

Continued from page 7

William Pittam, Oregon State College, Corvallis; H. A. Reinberg, Northwest Filter Co., Seattle; W. D. Rigg, Longview Fibre Company, Longview; H. H. Richmond, Electric Steel Foundry Co., Portland; Cass B. Roberts, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; H. K. Roberts, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas.

J. F. Robertson, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; M. V. Roley, Longview Fibre Company, Longview; Herlan Scott, Pacific Pulp & Paper Industry, Seattle; D. L. Shirley, Link-Belt Company, Portland; Fred R. Sievers, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; R. W. Simeral, Fir-Tex Insulating Board Co., St. Helens.

Larry Smith, Pacific Pulp & Paper Industry, Seattle; C. F. Stevey, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; Franz Sturm, Oregon Pulp & Paper Company, Salem; Philip Such, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; F. F. Sullivan, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; E. G. Swigert, Electric Steel Foundry Co., Portland.

Paul J. Thiess, Longview Fibre Company, Longview; E. H. Tidland, Pacific Coast Supply Co., Portland; Vernon L. Tipka, Portland; Cecil L. Triplett, Hawley Pulp & Paper Company, Oregon City; R. M. True, General Dyestuff Corporation, Portland; Mrs. W. J. Van Arman, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas.

L. H. Wear, Taylor Instrument Co., Portland; Fred J. Weleber, Hawley Pulp & Paper Co., Oregon City; R. S. Wertheimer, Longview Fibre Company, Longview; E. D. Webberley, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; Boyd K. Wickwire, Longview Fibre Company, Longview; B. Weidenbaum, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas.

J. A. Wilcox, Longview Fibre Company, Longview; J. M. Wilcox, St. Regis Kraft Company, Tacoma; J. B. Wilt, Spaulding Pulp & Paper Co., Newberg.

Weyerhaeuser Completes Recovery System

● The Pulp Division, Weyerhaeuser Timber Company at Longview has recently completed installation of a new sulphur dioxide recovery system and it is now in satisfactory operation.

The research laboratory, of which R. S. Hatch is director, has installed a small treating retort for the testing of wood preservatives and a small experimental dry kiln.

Milk Bottles

Continued from page 11

cost \$1,600 which would mean one cent per quart added to the price of milk."

Paper milk container manufacturers deny that the cost of milk would be increased.

One operator of a dairy outside of Seattle said that discrimination against these outside plants will have the effect of "building a tariff wall around Seattle."

The petition was referred to the Council's public safety committee. Later comments appeared to indicate that the petition of Dr. Carroll would not be granted, but that the city would shift the cost of inspecting pasteurization plants both inside and outside Seattle to the dairies themselves. Meat dealers and meat packers pay the cost of inspection and members of the Council privately expressed their opinions that dairies should not expect the city to pay their cost of inspection.

As no permit had been granted up to February 14th, the Gold Star Creameries obtained a superior court writ requiring City Health Commissioner Frank M. Carroll and the city to either issue a permit at once or to show cause in court February 18th as to why they had not done so.

In his affidavit requesting the court order, J. A. Zinn, president of Gold Star Creameries, stated that the Seattle milk ordinance had been amended to allow delivery of milk in other than glass bottles and that Dr. Carroll had inspected and approved both his plant and his paper containers. Nevertheless, Mr. Zinn was quoted in the press as declaring, Dr. Carroll had refused to issue the necessary permit without which Gold Star cannot market milk in Seattle.

The show-cause order issued by Superior Court Judge Malcolm Douglas apparently brought results as Dr. Carroll issued a permit to sell in Seattle to the Gold Star Creameries of Washington on the morning of February 15th.

● The above problem of the Gold Star Creameries is recited in some detail to show the pulp and paper industry that although paper food containers for ice cream, cottage cheese and a thousand-and-one other products are in daily use and accepted by both health authorities and the public, the paper milk container must overcome the opposition of dairies having heavy investments in glass bottles, bottle washing machines and other expensive accessories as well as the opposition of the manufacturers of the bottles who quite naturally are not going to sit idly by and allow the paper container to eliminate their business without a fight.

But with all the sanitary advantages on the side of the paper container, coupled with its lower cost all around and its convenience the paper milk container appears to have ultimate success assured.

When the entire country adopts paper milk containers the volume of wood pulp necessary will be a very large item and will contribute materially toward giving the value to our forests, that we here on the Pacific Coast know is so badly needed to put them on a permanent and profitable sustained-yield basis. It is only by increasing the profitable outlets for our timber that we can increase employment and at the same time extend the work of placing timber on a crop basis.

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PAPER

Salinas Valley Waxed Paper Enlarges Plant

Adds Building Papers To Line of Products

SALINAS Valley Wax Paper Company of Salinas, California, last year moved into a fine new steel and concrete one-story building and increased its facilities for manufacturing crate liners and car liners for the produce-producing area of the Salinas Valley and other vegetable sections of the southwest. In addition, the Salinas company has recently gone into the manufacture of building papers.

For seven years, since its organization, the Salinas paper company has operated in a building on the property of the Spreckels Sugar Company at Spreckels, four miles from Salinas. The new quarters are much larger. The new building is 60 by 210 feet in size.

● T. G. Emmons and Charles Goetz own this company as a partnership. Mr. Emmons is in active charge at Salinas and Mr. Goetz lives in Benson, Arizona, and operates an ice plant there belonging to the partnership. In addition, he handles the distribution in the Arizona produce-shipping areas of waxed papers from the Salinas plant.

Formerly Emmons and Goetz operated the Arizona Wax Paper Co.

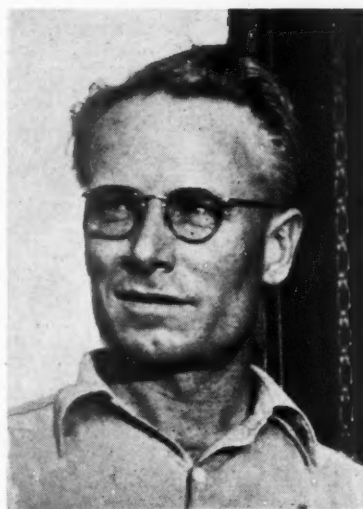
plant at Benson but this plant was dismantled this year and the equipment moved to Salinas and consolidated in the plant there, giving it greater capacity. Shipments formerly made from Benson are now made from Salinas.

Salinas Valley buys all of its raw material kraft paper from ST. HELENS PULP & PAPER COMPANY of St. Helens, Oregon. Mr. Emmons estimates they use approximately 150,000 lbs. per month.

● H. H. Fitch is foreman at the Salinas plant and about ten men are employed regularly. The plant now has two 80-inch waxing machines. Then there is a Hamblet sheeter, which slits the rolls and cuts the paper into the desired sizes.

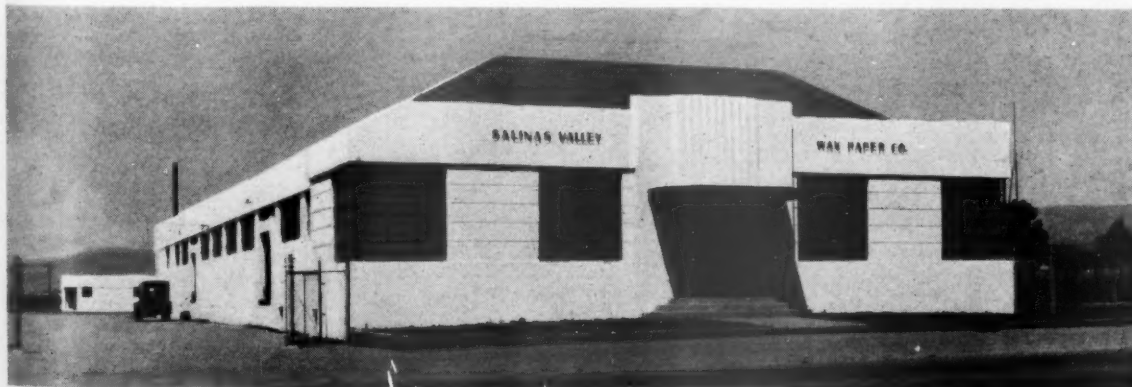
New equipment at the Salinas plant includes a Cameron Machine Company laminating machine which pastes sheets together to make car liners and building papers. This unit doesn't paste more than two sheets together but it could be increased for handling more, if desired.

● Tar for the building papers and wax for the vegetable papers must be heated, the tar to 400 degrees



H. H. FITCH
Foreman, Salinas Valley
Waxed Paper Co.

and the wax to 160 degrees. The heating units are controlled by electric thermostats, as a recent fire from the tar tank showed the management the weakness in their system of endeavoring to control this heat by manual-operated instruments.



The NEW PLANT of the SALINAS VALLEY WAXED PAPER COMPANY, Salinas, California, which uses ST. HELENS KRAFT PAPER.



At right is a "fly's eye view" of a section of a 120-screen halftone illustration, printed on medium-quality magazine stock. The black spots are halftone dots, magnified 75 times.

They say a fly sees things 75 times larger than they appear to the human eye. That means it sees in a printed sheet of paper all those minute imperfections that may affect printing quality.

But it has nothing on Kenwood. Here in the Kenwood laboratory, we get a "fly's eye view" through the

microscope—make microphotographs to study finish problems for our customers.

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Pacific Straw Running Full

General manager Arthur Zimmerman is still running the board mill seven days a week and the box factory five days. He has been planning on putting in a dozen new dryers on the cylinder machine, but is still having to wait a suitable time to shut down when orders are not too heavy.

● Charles F. Schaub, president of the Pacific Straw Paper & Board Co. has been ill in Longview for a short time, but was expected back at the office the middle of February.

Pomona Reports A Good Year

● The California Fruit Wrapping Mills will install, according to a recent announcement by F. O. Fernstrom, president of the company, a new printing press on March 15th at their Pomona plant. The new machine will be 36" by 63", 10,000 r.p.m., manufactured by Meisen Manufacturing Company. Mr. Fernstrom reports that last year's business showed an increase in 2000 tons production over the preceding year. The current year with the addition of plant improvements will see another 2000 ton increase, he predicts, in production.

Longview Fibre Installing Furnace

● A new Tomlinson furnace is being installed in the kraft mill of the Longview Fibre Company, Longview, Washington, and should be ready for operation about the middle of March.

First Aid Teams To Compete March 25th

● First aid teams of eight Washington pulp and paper mills will engage in a contest in the high school auditorium in Hoquiam, Washington, at seven p. m. Friday, March 25.

Teams will be entered by the three Rayonier Incorporated mills at Port Angeles, Shelton and Hoquiam, the Crown Zellerbach mills at Port Townsend, Port Angeles, Camas, West Linn, Oregon, and Lebanon. The contest will be held in accordance with the Bureau of Mines first aid rules, and certificates of merit will be awarded the teams taking part.

Fred Pontin, first aid instructor for the Washington State Department of Labor and Industry, is chairman of the advisory committee. H. H. Sanderson of Seattle and M. L. Mammen of Crown Zellerbach are other members of this group. J. W. Bagwill of Rayonier Incorporated, Hoquiam, is the chairman in charge of arrangements and publicity. The committee on contest rules is composed of S. W. Grimes, Rayonier Incorporated at Port Angeles, and E. P. Read of Washington Pulp & Paper Corporation, Division of Crown Zellerbach Corporation.

Shera to Present Paper at New York TAPPI Meeting

● "Caustic Soda in the Refining of Wood Pulp," by George E. Schmidt, Thomas W. Toovey and Brian L. Shea of the Pennsylvania Salt Manufacturing Company is the title of a paper to be presented at the TAPPI meeting in New York City, February 21-25th.

Mr. Shera, who is service engineer for the Pennsylvania Salt Manufacturing Company of Washington in Tacoma, will attend the New York meeting with Mr. Toovey of the company's Philadelphia headquarters.

"Gob" Des Marais Promoted By General Dyestuff

● H. A. "Gob" Des Marais, popular representative in the Pacific Northwest for the General Dyestuff Corporation and for four years secretary-treasurer of the Pacific Coast Division of the American Pulp & Paper Mill Superintendents Association, was appointed Pacific Coast manager of the company during January, according to an announcement by E. K. Halbach, president of the General Dyestuff Corporation.

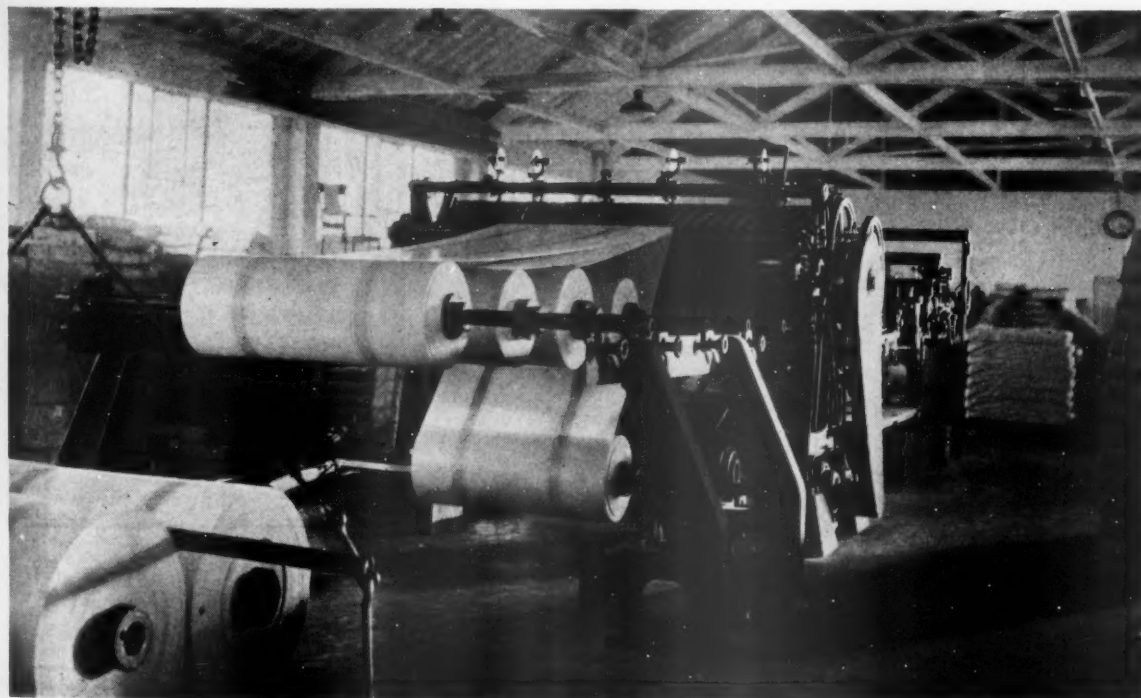
Mr. Des Marais assumed his new duties on February 1st. His headquarters will be in San Francisco but he will make frequent visits to the paper industry in the Northwest.

At the same time Mr. Halbach announced that Mr. Des Marais will be succeeded in the Northwest by Robert M. True whose headquarters will be in the Terminal Sales Building, Portland, Oregon. Mr. True arrived in Portland early in November last year from Grand Rapids, Minnesota, where he was beater room superintendent for the Blandin Paper Company. Prior to his connection with Blandin, Mr. True was with the Crocker-McElwain Company of Holyoke, Massachusetts. He is a chemical engineering graduate from the University of Michigan.

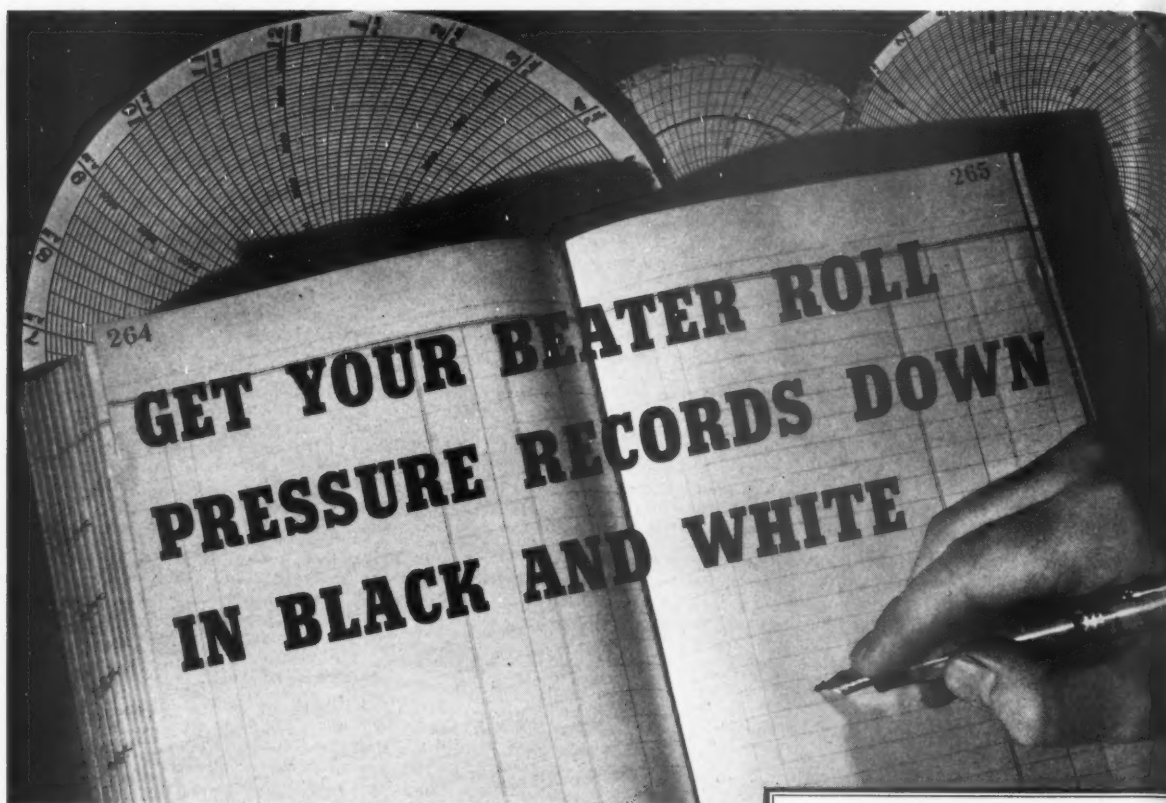
Al Hooker On Eastern Trip

● A. H. Hooker, Jr., of the Hooker Electrochemical Company, Tacoma, Washington, left during January on a boat trip through the Panama Canal to New York.

Mr. Hooker has recovered from his recent illness and the voyage is for the purpose of obtaining a rest, although he is going to New York on business matters. He will be back in his office in Tacoma early in April.



SALINAS sheet cutter with slitting attachment and layboy, from the roll stand end.



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IF your beaterman uses the sounding rod, he knows *approximately* whether proper beater roll pressure is being maintained. But the rod doesn't give him an exact, automatic record any more than a mechanical roll position indicator does.

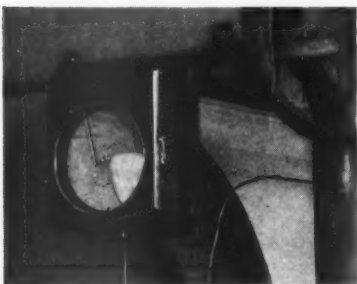
You can't depend on "approximately's" nowadays. Costs are too high, competition too keen. Today, more

than ever, it pays to *know exactly!*

That's why so many millmen are putting Taylor Beater Roll Pressure Recorders to work. They've found it profitable to trust accurate, black-and-white records. It means that efficient roll pressure is maintained. The stock is more uniform. Beating time is cut and beating capacity boosted without adding new beating equipment. Power consumption per ton is reduced. And so is drying cost on the machine.

Taylor Beater Roll Pressure Recorders are only one type of installation Taylor engineers have designed for paper mills. All are money-savers and profit-makers. To put your mill on an even more efficient basis, get in touch with a Taylor representative. Or write Taylor Instrument Companies, Rochester, N.Y. Plant also in Toronto, Canada. Manufacturers in Great Britain—Short & Mason, Ltd., London, Eng.

Pacific Coast Sales Offices—145 Mission St., San Francisco, Cal., and Central Bldg., Los Angeles. Also, Terminal Sales Bldg., Portland, Oregon. Complete repair facilities for all Taylor Instruments are available in San Francisco. For your protection, have adjustments or repairs to Taylor Instruments made by Taylor.



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by Vice-President and General Manager of One of Finest Linen Paper Mills in New England...

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Mr. C. D. Dammers
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Dear Mr. Dammers:

You probably by this time have received our order for the four beater roll pressure recorders.

Our first installations have proved very satisfactory. While we show a small saving in power, the chief benefit is in the uniformity of the beaten stock. This is very noticeable on the paper machine, the drying pressure remaining nearly constant. Before the pressure regulators were in use, it was not unusual to vary from five to eight pounds. We have also noted a very marked improvement in our folds.

Very truly—

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Enghouse Joins TAPPI

Clarence Enghouse, technical supervisor of the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation's West Linn, Oregon, pulp and paper mill, recently became a member of the Technical Association of the Pulp & Paper Industry.

Mr. Enghouse is a 1924 graduate of Oregon State College.

Oriental Situation Hurts Coast Newsprint Exports

● War in the Orient has struck a paralyzing blow at trans-Pacific trade of the British Columbia newsprint industry, and pulp exports have also suffered as a result of the general dislocation of shipping, collapse of markets and economic disability of the warring nations.

Commandeering of a large fleet of Japanese cargo ships early in the campaign made it necessary for newsprint shippers to make drastic changes in their shipping policy owing to diversion of available tonnage. Blockading of Chinese seaports made it impossible to ship direct to the China market, which had been one of the most important outlets for pulp and paper in the Far East.

However, a temporary way of meeting the difficulty was found by shipping to Hongkong, the British colony, which maintained regular trans-shipment facilities to Canton. From Canton large quantities of British Columbia newsprint and pulp found its way to Chinese cities, although it will probably never be known to what extent the distribution was effected.

The British Columbia paper manufacturers took the position that they had contracts to fill, and they did the best they could to fill them under extremely difficult conditions. When Japanese warships bottled up Canton, however, the movement of paper and pulp and other freights from Hongkong and every other port was completely blocked.

● "The result is that we are not shipping a ton of paper to China today," a Powell River Company executive told Pacific Pulp & Paper Industry. "There is no use shipping paper to Hongkong and having it accumulate on the wharves. With the war dragging on as it has done for months, there is no guarantee of delivery at any future date. Hongkong itself is an inconsequential market, consuming less than many of the smaller Chinese towns. Parcel newsprint shipments will be maintained to the Hongkong newspapers, but the China business has shrunk to nil."

The whole situation with respect to Oriental sales is as cloudy as the general war outlook. The only consoling thought is that ultimately there will be a big demand for replacements of depleted stocks, but that affords little comfort at this time, especially inasmuch as many of the publishing plants would be unable to resume operations even if the war were to stop tomorrow. And if they were able to re-open, the prospect of paying for newsprint or any other required commodity would be remote.

About the only hope left, so far as the China field is concerned, is a speedy termination of the war, for the earlier hostilities, with their consequent disruption of all services, are ended the sooner

it will be possible for newsprint consumption to get back to a level approaching normal.

Even Japan has been buying only on a hand-to-mouth basis, according to British Columbia pulp and paper exporters. This is partly due to a conservation of all industrial activity in Japan except that which is regarded as "essential," and curtailment of newspaper editions has evidently been a result of this policy. Another difficulty has been Japan's disinclination to send funds abroad except for vital war materials. Nearly all purchases being made by Japanese private interests now are on a credit permit basis, and supervision over such purposes has become increasingly strict.

Exchange contracts in South American countries adversely affects business with the Pacific Northwest, and pulp from British Columbia is unable to compete favorably with the product of Sweden and Germany. Owing to declining markets in Europe and elsewhere, some Scandinavian pulp exporters are said to be quoting almost "distress" prices for their goods in South America.

Australia is the one bright spot in the Pacific, so far as export sales are concerned. Prices for newsprint and pulp in the commonwealth are relatively firm, and the market shows signs of expansion. Since the negotiation of a long-term contract with a group of Canadian newsprint mills for a supply of newsprint at stabilized prices, Australian publishers have been able to plan ahead, and shipments to that market from this coast will probably be maintained at a fairly even level for some time.

Flintkote President Sees Need for Roofing

I. J. Harvey Jr., president of The Flintkote Company, in a recent statement backing the administration's new housing legislation, stated in part that,

"In our industry, technological product advances have been rapid in recent years and the selling prices of our roofing, siding and home insulation products have tended more and more toward economy for the home owner. Flintkote research engineers have developed new products especially adapted to low-priced housing. In the modernization and home repair fields, too, special attention has been given to the development of low-priced durable roofing, siding and home insulation products."

"Relatively little has been accomplished in the home modernization and repair fields, he added, surveys showing that there is a backlog of 40,000,000 squares of deferred re-roofing in the country today which cannot be postponed longer without causing serious property damage. This represents four billion square feet of roofing materials, a quantity sufficient to re-roof approximately 2,600,000 homes."

Tasmanian Mill To Start Next Year

At the annual meeting of the Associated Paper and Pulp Mills, Ltd., an announcement was made that during the first half of 1938, the mills would commence production on a commercial scale. Plant capable of producing 15,000 tons per annum of printing and writing papers is being installed at Burnie, Tasmania. In addition to manufacturing paper, the company will investigate the possibilities of exporting its surplus pulp.

Expan Company Resumes Making Plant Protectors

● Production is in full swing at the Expan Company at Redlands, Calif., of propagating pots to meet the seasonal demand. Tree protectors will be on the production schedule later. Since a fire in 1935 destroyed the company's dies and equipment for the manufacture of plant covers, this division of its production has been suspended. All machinery for making this product has to be made specially and gradually replacement is being made. W. P. Gregg, president of the firm, reports that despite his loss in their line they are moving along at a good pace and enjoying good business.

Ocean Falls Has Plenty of Water This Winter

● Although officials of Pacific Mills, Ltd., at Ocean Falls, are still considering plans for augmenting the company's water supply so as to avert any shortages that may develop, there is no reason for them to worry this winter. Reports from Ocean Falls are that more rain has fallen there this winter than for many years, and that the supply of water was never higher.

Two years ago it was found necessary to curtail production drastically at Ocean Falls, several machines being shut down completely owing to water shortage. So long as this possibility exists, the company will continue its surveys with a view to developing a more dependable source of water, but the experience of this winter has eliminated the emergency for the present season, and installation of additional water facilities may await return of more prosperous conditions in the industry.

Ostenson Resting In California

● Henry E. Ostenson, superintendent for the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, at Camas, is now recuperating from a recent illness at Mission Beach, California.

Finns Propose to Cut Wood Exports

The Central Association of the Finnish Wood-working Industries has requested the Government to prepare a bill to the Diet providing for legislative measures authorizing the Government to restrict exports of spruce pulp wood if public interest should make such measure justified.

Finnish Mill to Make Kraft Paper

Lojo Cellulosafabriks A.B. have decided to add a paper mill section to their sulphate mill at Lojo, which also will be increased from 15,000 to 20,000 tons capacity. The production of paper will be some 6,000 or 7,000 tons a year. A yankee-machine of 120 in. width has been ordered from Fullnerwerk and is scheduled to be started up in August 1938. The company have filed a membership in the Finnish Paper Mill Association and in Skankraft.



Sulphur

Service

VISIBLY Texas Gulf's service consists of the prompt shipment of thousands of tons of Sulphur by rail or water to paper mills in all parts of the United States and Canada. This Sulphur, 99½% pure, is drawn from a reservoir constantly replenished at the rate of thousands of tons a day.

But back of these scenes is a service of importance to paper manufacturers. It is Applied Research . . . with all that the term implies. Sulphur—its properties and benefits—is being constantly studied by Texas Gulf's technical staff. New uses are being sought. Processing steps are being improved. Better handling methods are being developed.

One of the recent improvements in the handling of Sulphur is the TEGUL Sulphur Melter. Full details and construction drawings regarding this device will be sent on request.

TEGUL
Sulphur Melter



A device that can be started or stopped in 10 minutes. Capacity varies from 1 to 6 tons per hour. No over-heating. No viscous sulphur. Handles damp sulphur permitting open storage. High capacity. High efficiency. No operating supervision.

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Hemlock Bark Potential Tannin Source

Bark from the Western hemlock, a tree used extensively for lumber and pulpwood in Washington and Oregon, is a potential source of tannin, the vegetable product used in the tanning of heavy leathers, reports the Bureau of Chemistry and Soils, U. S., Department of Agriculture.

In a recent publication, "Western Hemlock Bark a Potential Tanning Material," Technical Bulletin No. 566, the late Charles C. Smoot and Ralph W. Frey describe Western hemlock bark tannin as a high grade product which may be used alone or blended with other tannin extracts such as those made from the chestnut and quebracho trees.

Leather tanned with Western hemlock bark extract alone is firm but not harsh. Its fiber weave and fiber strength is rated excellent, although the color of the tanned product is undesirably dark. When mixed in blends up to 50 per cent it produces a leather of even color that is noticeably firm and with a tight fiber particularly suited to outer sole leather.

Substituting hemlock extract for one-third of a regular blend improved slightly the cutting value of both outsole and insole leathers and increased their ability to withstand wetting and redrying without loss of solidity and pliability. This blend also added about 7 per cent to the wear of sole leather, as shown by service tests conducted at the United States Naval Academy.

Western hemlock grows in California, Idaho, Montana and Alaska, as well as in Washington and Oregon. Within the continental area it is estimated that there are more than 200 billion board feet of the timber. About 5,000 board feet will yield one cord of bark, or about one ton. Five and one-half tons of the bark produce one ton of tannin extract containing 55 per cent tannin and having a market value of about \$88 when figured at 8 cents per tannin unit. This would make the bark worth around \$5 to \$5.50 per cord and on this figure actual commercial developments hinge. It remains to be seen if this price range proves sufficient inducement for proper salvaging of the bark from which the extract is made.

Large quantities of the bark are now going to waste in the Washington-Oregon area where more than 400,000 cords of it are cut annually. However, most of this bark is not in available form for making tannin extracts as it is removed either mechanically or with the slab and is consequently mixed with a high proportion of wood, that contains very little tannin. The ideal bark, say the department scientists, is hand-peeled and cured properly in the woods.

As for the use of tannin, the bulletin points out that the leather industry of the United States annually consumes about 115,000 tons, an equivalent of 460,000 tons in the form of 25 per cent tannin extract. This country consumes about half the world's supply of tannin. About half of the U. S. needs are imported—coming mostly from quebracho wood from South America. Our major domestic source of tannin is the chestnut tree, which is steadily being exterminated by the chestnut blight.

Tannins are used in making vegetable tanned leathers, especially heavy leath-

ers, such as sole, belting, harness, case, bag and strap. About 425 million pounds of vegetable-tanned leather is the estimated annual production for this country of which 82 per cent is sole and other heavy leathers.

Coast Newsprint On 5-Day Basis

● Powell River Company and Pacific Mills, the two big British Columbia newsprint manufacturers, are continuing to operate on a five-day week basis. Domestic market for newsprint is reported to be firm, and there is no prospect of breaking the \$50 a ton agreement with publishers, according to officials of the two companies.

Although most of the eastern Canadian mills have drastically reduced their operations as a result of the slackening in demand, due to heavy over-buying by United States publishers last year before the higher price took effect, coast newsprint men say there is no sign of weakening so far as price maintenance is concerned. The industry's chief worry is whether consumption will maintain a reasonably high level during the present year, when present stocks are absorbed.

It is now reported that the surplus newsprint stocks at the end of the year 1937 were approximately 400,000 tons, about 100,000 tons more than had been previously estimated.

Allowing for the prospect that a proportionate share of this total may be liquidated at the expense of the American mills and further, that consumption in 1938 is as great as it was last year, the Canadian newsprint industry may not produce more than 2,900,000 tons this year, compared with 3,650,000 tons in 1937.

Consumption of newsprint in the United States during November and December declined in comparison with the same months of 1936, and the general feeling is that the trend will not undergo much change for the time being. Recovery of general business conditions in the United States during the latter part of the year may increase advertising linage and in turn bring about greater consumption of paper, but prospects are not favorable for an increase in paper consumption this year.

● Owing to shortage of orders, most of the eastern Canadian mills are operating on short time, many of them at less than half of capacity. As usual, Pacific coast mills are probably maintaining the highest percentage of capacity, even though they have been temporarily deprived of the Oriental market.

Most newsprint operators feel that January and February will bear the brunt of the over-buying by publishers last fall, but there is general agreement that it will require five or six months to complete the liquidation, especially in view of the reduction in the consumption of paper owing to business declines. Figures of the American Newspaper Publishers Association show that the publishers had on hand or in transit to them at the end of December a supply of more than 613,000 tons. Further, the operators' mill stocks totalled 49,657 tons, while the warehouse stocks were in the neighborhood of 120,000 tons, making a total supply on the North American continent of nearly 785,000 tons.

Under normal conditions, the pub-

lishers carry from 35 to 40 days' supply of newsprint paper—around 300,000 tons at the higher figure, while the manufacturers' mill stocks would normally be about 75,000 tons.

With an over-supply of nearly 400,000 tons of newsprint at the beginning of 1938, the newsprint industry will have to carry the load until the publishers use up this lower cost paper. Further, as the available supply was 400,000 tons greater than actual consumption the industry will have 800,000 tons less to produce this year in order to bring production in line with consumption in 1937.

Rights Extended On Campbell River Power

British Columbia Power Corporation has extended for another year its reserve on water power at Campbell River, Vancouver Island, where several years ago a large news print mill was contemplated by Pacific Coast interests.

President W. G. Murrin told Pacific Pulp & Paper Industry that extension of the reserve was merely a routine move, and that no development was anticipated.

"We have a considerable investment there," said Mr. Murrin. "We have made many surveys, and eventually a pulp mill or pulp and paper mill will probably use Campbell River power, but I know of no plans for early development in that respect."

Cold Weather and Paper Distortion

The National Bureau of Standards issued a warning a year ago that cold-weather may bring serious paper troubles for printers if the proper precautions are not taken in the handling of cold papers; that exposure of cold paper to the warm atmosphere of a heated pressroom will cause the formation of wavy edges, a troublesome form of distortion familiar to most printers. The Bureau has since studied the problem by observing the effects of exposing cold paper to room atmosphere, and by determining the time required for the paper, in cases and covered piles, to reach room-temperature so that it can be safely exposed. It was found that the heat transfer for a pile of paper is very slow. A typical pile of paper 32x38x36 inches, covered with waterproofed paper, required over a hundred hours to reach room temperature if 70° F. colder than the room air at the start. Smaller piles warm more rapidly, a pile 20x38x12 inches requiring 72 hours for a 70° F. change. Data have been obtained on the temperature conditioning for various paper sizes and a range of temperature differences. It has been found that the average pile or case of cold paper will warm to room temperature at the rate of approximately 20° F. for 24 hours. Removal of the waterproofed covering from paper while it is still colder than the air will permit the edges to absorb moisture condensed from the atmosphere. This results in expansion of the paper at the edges which causes the distortion commonly known as wavy-edges, and there is no practical method known for removing this form of distortion once it is formed.

Trade Talk



of Those Who Sell Paper in the Western States

Brown Paper Goods Adds New Line

● Mr. C. E. Digby, secretary-treasurer and general manager of the Brown Paper Goods Company of California, announced early in February the addition of a new paper specialty to the company's line. The house has been a pioneer in the manufacture of several specialty items, according to Mr. Digby, having pioneered the manufacture in Southern California of glassine bags in 1934, the manufacture of paper napkins in 1935 and now with the first production starting March 15th of a line of cocktail napkins.

The addition of \$10,000 worth of new equipment was necessary to make this new line possible. Production will go ahead at both the Los Angeles and Oakland plants. Mr. Digby stated that in the past it has required from three to six weeks to bring specially printed cocktail napkins from the east, and now with their new equipment they will be able to make them here in less than a week's time for delivery.

The Brown Paper Goods Company of California, of which Mr. A. C. Brown of Chicago is president, use all Pacific coast raw materials in the manufacture of their paper specialties. From a plant employing 12 men in 1934, the company has expanded to two now employing more than 100 men.

General Paper Announces New Lines

● General Paper Company, San Francisco, announces it has taken on the Parsons Paper Co. line of Crest ledgers and Millers Falls Paper Co. line of Old Deerfield Bond.

B. M. & T. Acquire New Stockton Headquarters

● An old Stockton landmark—the Sperry Flour Company building—has been renovated and remodeled to become the headquarters of the Stockton division of Blake, Moffitt & Towne, Pacific Coast paper jobbers. L. M. Heath is manager at Stockton for BM&T.

The address is 325 West Weber Street and the paper firm has taken three of the building's six stories. Improvements included a spiral chute, speaker system and new elevators. In all, they have 40,000 square feet and can expand to the upper floors as they need more space. There is a private dock at the building.

Discuss Dissolution of Paper Trade Assn.

● Victor E. Hecht, president, and Arthur H. Dunn, counsel of the Pacific States Paper Trade Association, both of San Francisco, in January met with paper jobbers in the San Francisco, Los Angeles, Portland, Seattle and Spokane trading areas and, among other things, discussed plans for the dissolution of the Pacific States Paper Trade Association. Round table sessions were held and reports were made of recent federal laws as they affect the wholesale paper trade.

Paterson Pacific News

● W. G. Battson of the Paterson Parchment Company, San Francisco, is spending two weeks of February at the home plant of the Paterson Parchment Paper Company at Bristol, Pennsylvania. Mr. Battson is doing some special work for Paterson and his place in the San Francisco office has been taken by Howard Hughes.

C. H. Cashmore, president and treasurer of the Paterson Parchment Paper Company and president of the west coast subsidiary, was a San Francisco visitor in January. He will return in March for the annual meeting.

Paterson-Pacific held its annual sales meeting at San Francisco in January. Presiding was W. J. Gray, manager, and present were Mr. Battson, Mr. Hughes, C. G. Bennett of the northwest territory, F. D. Smith from southern California, and E. C. Roeder, field man at San Francisco.

Towne and Watson Honored

● Reeve T. Watson, advertising manager of Blake, Moffitt & Towne, is a new member of the board of directors of the San Francisco Advertising Club. He also is chairman of that body's direct mail department committee.

Arthur W. Towne of BM&T is western governor of the Direct Mail Association of America and chairman of the direct mail department of the Pacific Advertising Clubs Association. He will attend that organization's convention at Los Angeles in June.

Crystal Paper In New Factory

● The Crystal Paper Service Corporation moved into its new offices and factory in mid January. A one story structure, the new plant is of brick and concrete construction along the latest modern factory lines. It comprises a floor space of approximately 20,000 square feet. Its location at 3050 East 11th Street is in the heart of one of Los Angeles' latest developed industrial sections. The company has been operating in Los Angeles for fifteen years. It was formerly located at 249 North Reno Street.

The new plant will manufacture the complete Crystal Paper Service line including paper souffle cups, paper drinking cups, paper containers, paper water bottle caps and other paper specialties. The firm has enjoyed a steady growth over the years and is distributing its products nationally. Mr. Jack Williams is president and general manager and Paul R. Raab is secretary-treasurer.



The CRYSTAL PAPER SERVICE CORPORATION'S new Los Angeles plant for the manufacture of paper specialties.

Sternberg Returns To San Francisco

Back to his home town of San Francisco has come Sol Sternberg to take charge of the recently-established branch office there of the Wilson Paper Co. of Los Angeles. Three years ago Sternberg left the Elkus Paper Co. in San Francisco to go with Wilson in Los Angeles. Opening of the new San Francisco office is a step in an expansion program. The firm handles wrapping papers, twines, boxes and other coarse paper products. Aide to Sternberg at San Francisco is Howard Cecil, also from Los Angeles. The office is at 33 Fremont St., San Francisco.

Ed O'Neill, formerly with the Western Paper Converting Company, Salem, Ore., is a salesman now with the Wilson Paper Co. at its new San Francisco office.

A. J. Wilson of the Los Angeles head office was in San Francisco in February visiting the new branch. He and his brother, Charles, own the firm.

Badger Paper Moves To New Building

• The Badger Paper Company moved into its new home on January 8th at 8670 S. Atlantic Boulevard in South Gate, California. The company formerly located at 643 South San Pedro Street in Los Angeles, has been in the paper jobbing business in this section for four years. The new building is a single story brick and concrete modern warehouse and office building. It has a floor space of 15,000 square feet and was erected at a cost of \$20,000. It is located on property owned by the Davenport Manufacturing Company. A Union Pacific siding serves the warehouse. The company engages in general wrapping paper business and handles Pacific coast products primarily. Messers S. Calof, E. Calof and A. Kaufman comprise the partnership which operates the firm.

L. A. Paper Men Hold Dividend Party

• The Executive Committee of the Paper Mill Men's Club of Southern California sponsored (and right well) a Dividend Party at the California Riviera Country Club Thursday January 27. One hundred paper men and guests enjoyed themselves at this fine frolic. Those who "liked exercise" as the program listed it participated in golf during the afternoon. Among those playing at the same time, it is reported, were Babe Didrickson, Richard Dix, Jack Oakie and several other celebrities from nearby Hollywood. Benno Simank, a guest shot the best nine holes. Chas. Spies took the blind bogey.

Ping pong, pool, billiards and other games occupied many of the members just prior to the delicious dinner which next to the floor show was the greatest feature of the evening. Neil Sinclair, chairman and president, appointed S. G. Wilson and W. R. McHaffie as a committee of two to draw the winning tickets out of the hat for the door prizes. There were two prizes and they went to J. Salisbury and Neil Sinclair (to the loud flourish of comment from the crowd). The floor show followed and included a magician who was a master of the black art of no small accomplishments.

ish of comment from the crowd). The floor show followed and included a magician who was a master of the black art of no small accomplishments.

Bailey Visits Coast Distributors

• Edward Bailey, sales manager of Hollingsworth and Whitney Co. of New York paid his annual visit to the Pacific Coast during January and February. Mr. Bailey was in Los Angeles for a week visiting jobbing connections, continued on to San Francisco where he spent another week and completed his journey visiting the trade in the northern cities, Portland and Seattle.

S. F. Box Makers Entertain Visitors

• Two out-of-town visitors at a weekly luncheon of the San Francisco Paper box manufacturers this month were J. W. Scully, Seattle, president of the Puget Sound Paper Box Company, and Charles Ruble, president, and J. F. Buehner, credit manager of the Standard Paper Box Corporation, Los Angeles.

Kaplan Paper Moving to Larger Quarters

• The Kaplan Paper Company of Seattle is moving March 1st to new and larger quarters at 315 Third Avenue South. The new location will give the company 36,000 square feet of floor space. The former location was at 117 Madison Street, Seattle.

Pfiffner Makes Coast Trip

• R. X. Pfiffner of the Whiting-Plover Paper Company of Stevens Point, Wisconsin, visited in San Francisco in January and called on L. A. Colton, vice-president of the Zellerbach Paper Company.

Coast Box Association Moves Offices

• Offices of the Pacific Coast Paper Box Manufacturers Association are now in Room 616 in the Underwood Building, San Francisco. Secretary Hugh Peat and his staff moved from the Marina Building in January.

On the Next Two Pages

Are photographs of Blake, Moffitt & Towne's new and modern San Francisco warehouse and office building

• Blake, Moffitt & Towne, pioneer Pacific Coast paper jobbers, moved into their new office and warehouse building in San Francisco late this past summer.

The arrangement of offices and warehouse facilities in the new building was the result of many years of experience and represents the most modern and efficient system known in the paper distributing business.

At the top of the next page (page 44) is a general view of the offices. Executives are on the left, the salesmen's desks in the center. On the right is the telephone operator, and the Perpetual Inventory, Country Shipping and Manufacturing departments.

In the center of the next page is the Shipping Department, located on the first floor. At the left freight cars are being unloaded. At the center right are the cutters.

Below is the cafeteria, located in the penthouse of the San Francisco headquarters of Blake-Moffitt & Towne, where some 150 employees may eat and relax during the noon hour.

• On page 45, at the top of No. 1, shows one corner of the Shipping Department with the spiral chute coming down from the floors above. There is an endless belt conveyor to bring stock up from the basement and a tube system for dispatching orders to all floors.

Picture No. 2, on page 45, is of the new type of equipment employed in

handling cases of paper. All cases are stacked with blocks between, enabling the prongs on the hoist to go between the cases for lifting. Two hoists are shown in use, enabling an operator to remove a case from the center of the stack. All cases are stacked on skids, which helps the operator to move them into position for the hoists.

Picture No. 3 shows the Assembly Room for salesmen's meetings.

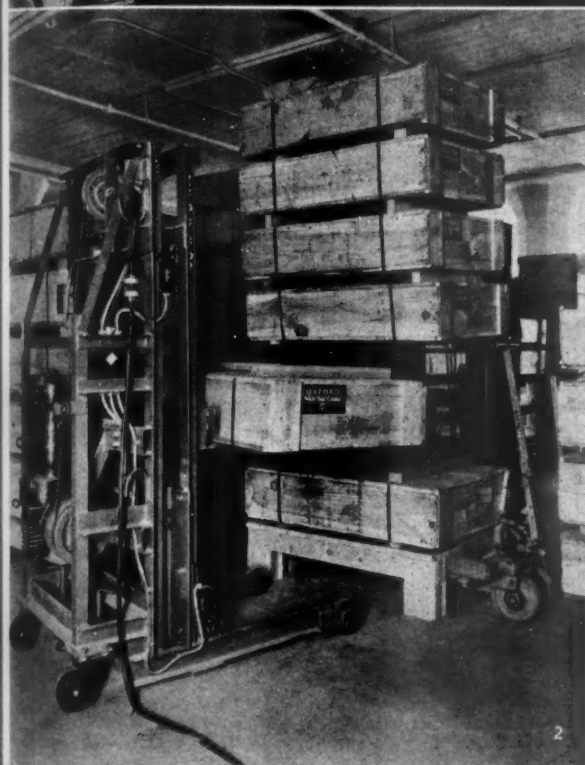
No. 4 shows one corner of Blake, Moffitt & Towne's laboratory at the San Francisco headquarters, where all paper and paper products are tested. This laboratory is said to be one of the finest of its type in the country and is fully equipped to perform research work.

• The adjustable bins are pictured in No. 5. This method permits accommodation of any amount of stock without waste of space. Many more items may be stocked in a limited space by the use of the adjustable pins.

In No. 6 is the telephone switchboard in the office which is located at a height permitting the operator to have a full view of all departments. The Printing paper and Wrapping paper executive offices are in the background, as are the purchasing offices for both departments.

An exterior view of Blake, Moffitt & Towne's fine new building was published in the August 1937 number of this journal.





Paper Mill Men's Club Held Christmas Party

● A fine tradition of the Paper Mill Men's Club of Southern California is the annual Christmas party given for a group of underprivileged boys. This year's observance of the custom was exceptional. The officers, Neil B. Sinclair, Dewey Megel, George C. Weiman and Al C. Hentschel, and the Christmas party committee, Louis T. Mork, Kenneth R. Ross and Louis Wanka did themselves proud in putting on the event.

The boys are not delinquents but merely underprivileged and under the surveillance of the county probation department for varying reasons. Mr. Sinclair welcomed the guests, friends and members of the club in an opening talk. This was followed by a tasty Christmas dinner prepared under the personal direction of "Bob" Axelrod, genial steward of the Jonathan Club, scene of the party.

George C. Weiman was master of ceremonies and followed with the introductions. Christmas songs filled in and "Billie" Meyers was the songleader. Reginald Denny and J. Blackton gave an interesting talk on aviation and model airplane building. Next a fifteen minute movie of the Pacific Motor Boat Trophy Speedboat race was shown. Gifts were then distributed to the boys and the meeting came to a close.

Mielke to Attend New York Meeting

● O. W. Mielke, general manager of Blake, Moffitt & Towne, leaves February 15 to attend a National Paper Trade Association meeting in New York City.

REDDY KILOWATT

Your Electrical Servant, Says:



*"February is here—
I'll like it fine
If You'll let me be
Your Valentine."*

**★
PUGET SOUND POWER
& LIGHT COMPANY**

"To Best Serve the Public Interest"

Second L. A. Labor Election Results

● A second collective bargaining election held by the warehousemen at the Zellerbach Paper Co. in Los Angeles under the direction of the National Labor Relations Board resulted in a vote for the establishment of the International Longshoremen's and Warehousemen's Union, affiliate of the Committee for Industrial Organization as the collective bargaining agency for the men at that company. The vote was reported as 31 for the agency and 26 against.

Another election for the same purpose was held at Blake Moffitt and Towne's Los Angeles warehouse and resulted in the establishment of the Brotherhood of Teamsters, Chauffeurs, Stablemen and Helpers Union being named as collective bargaining agency for the warehousemen at that firm. This is an affiliate of the American Federation of Labor. The vote was 29 for the A. F. of L. body, 19 against it, and 6 votes were cast for non-representation by any collective bargaining agency. Both elections occurred early in February.

Midland To Handle Nekoosa Lines

Announcement was made last month in Chicago that the Midland Paper Company of that city, a division of the Zellerbach Paper Company, would handle the bond papers manufactured by the Nekoosa-Edwards Paper Company, known as Nekoosa Bond. The Nekoosa line includes Nekoosa Bond and Ledgers, Mimeo Bond and John Edwards Bond.

The Midland Paper Company formerly sold the Howard Paper Company's Howard Bond, but is reported to be discontinuing this line upon the acquisition of the Nekoosa papers. The Howard agency formerly held by Midland has been taken on by the Blundon-Lyon Paper Company of Chicago, which means that Howard still has three jobbers representing them in the Chicago area, the other two being Parker, Thomas and Tucker and the Moser Paper Company.

The Butler Paper Corporation will act jointly with Midland Paper as Nekoosa representatives in the Chicago territory.

On the Pacific Coast the Howard line of papers is distributed by Blake, Moffitt & Towne.

Mrs. R. M. Brooks Dies Suddenly

● The many friends of R. M. Brooks of the Hollywood Paper Company of Los Angeles were shocked to hear of the sudden death of Mrs. Brooks. Members of the industry extended their deep sympathy to Mr. Brooks in this great loss.



St. Helens Adds Towel Line

● A new item recently added to the line of products manufactured by the St. Helens Pulp & Paper Co. is bleached kraft paper roll towelling.

Nields Has A Visitor

● J. F. Nields, San Francisco branch manager of the Nashua Gummed & Coated Paper Company, for years has had an office in the Underwood Building but seldom is there, for his job is to be out among his trade.

Recently Jim had a visitor—Sam Platt, president of the United Paper Box Company of San Francisco.

"Do you know, Sam," Jim said, "I believe you're the first customer ever to come into our office here!"

Williamson, Mendoza Win Service Pins

● Wearers of two new Zellerbach Paper Company service pins in Los Angeles are:

Hugh Williamson, 20 years.
Frank Mendoza, 25 years.

Colton to Los Angeles

● Louis A. Colton, San Francisco, vice-president of the Zellerbach Paper Company, was a Los Angeles visitor in January. One of his objectives for the trip was to bid farewell to William C. Wing, president of the Fox River Paper Company, off on another trip to Honolulu.

PULP BLEACHING COMPANY

ORANGE
NEW JERSEY

CELLULOSE
PURIFICATION

Imports and Exports at High Levels in 1937

Exports of paper and paper manufactures from the United States reached a total value of \$31,088,199 during 1937. This sum represents an increase of 34 per cent over the preceding year, and is the highest amount recorded since 1929, when exports of paper and manufactures were valued at \$37,189,486. If the \$22,987,498 representing the value of exports of paper base stocks are added to the paper total we find the value for the group exceeding the corresponding total for 1929 by \$11,807,900 or 28 per cent, and highest for any year since 1920.

A noteworthy feature of the 1937 exports is that all classes show an increase in volume over 1936. In the five groups, exports of newsprint increased 17 per cent, book papers 65 per cent, writing papers 43 per cent, surface-coated papers 25 per cent, and bristols nearly 200 per cent. Gains in the wrapping paper field occurred principally in shipments of kraft, which were larger by 56 per cent and greaseproof and waterproof papers which increased 16 per cent. Exports of other classes of wrapping were about 1,000,000 pounds heavier than in 1936, but this represents a rise of less than 4 per cent. In the board group boxboard shipments were higher by 27 per cent, other paperboards by 50 per cent, and sheathing and building papers by 74 per cent. One of the largest gains occurred in shipments of tissue and crepe, which were 96 per cent heavier in 1936. In the converted products group, paper bags increased 47 per cent, toilet paper and towels and napkins 34 per cent, paper boxes 22 per cent, cash register and add machine paper 26 per cent, and envelopes and pappeteries, 20 per cent.

Exports of paper base stocks last year nearly doubled in value compared with 1936. Exports of wood pulp alone were valued at \$19,841,483, an increase of \$9,891,307 or 87 per cent over the preceding year. Exports of other stocks, comprising rags, old papers and other waste, and a small amount of pulpwood, were valued at only \$3,096,015, this figure, however, representing an increase of 14 per cent over 1936. The rise in value of the 1937 shipments was due partly to the higher prices ruling during 1937, and partly to the heavy increases in bleached sulphite in comparison with other classes of pulp.

Imports of newsprint, which account for between 80 and 85 per cent of the value of our total paper imports, during 1937 reached the highest figure recorded for any one year. Aggregate receipts totaled 3,317,024 tons, an increase of 565,444 tons or 20 per cent over 1936. The value of these imports during the same period rose from \$96,719,170 to \$122,529,421, an increase of 26 per cent. Other classes of paper imported during 1937 reached a total value of \$14,540,570, an increase of 9 per cent over the 1936 figure, \$13,393,178. The chief classes contributing to this rise were printing papers exclusive of newsprint and miscellaneous boards which rose 47 per cent and 21 per cent in volume respectively. Imports of pulpboards in rolls, another important item on the schedule, were only 2 per cent higher than in 1936 while imports of kraft wrapping declined 31 per cent.

Imports of greaseproof and waterproof papers increased 45 per cent and miscellaneous wrapping papers 20 per cent, but both these classes are relatively unimportant from the standpoint of both volume and value. Imports of cigarette papers, which rank next to newsprint in the aggregate value of the receipts were only three per cent higher than in 1936.

Imports of paper base stocks into the United States during 1937 were somewhat larger than in 1936, although the increase of 19 per cent in value was due largely to the higher prices prevailing last year. Imports of unbleached sulphite were 17 per cent higher and of bleached sulphite 9 per cent higher in volume than in 1936, but other classes show slight decreases in volume with the result that the total for the group was only 5 per cent higher than in 1936. Imports of all classes of wood pulp reached an aggregate figure of 2,394,605 tons as against 2,277,500 tons in the preceding year. The largest item under this classification was unbleached sulphite, amounting to 919,680 tons, followed by unbleached sulphate, 622,353 tons, and bleached sulphite, 511,961 tons. These three items accounted for 85.8 per cent of the wood pulp receipts. The remaining 14.2 per cent comprised 218,422 tons of mechanical pulp, 111,862 tons of bleached sulphate, and 10,327 tons of soda pulp. Imports of pulpwood rose to 1,522,868 cords last year, an increase of 313,108 cords or 26 per cent over 1936. A slight decline occurred in imports of waste stock due to a drop of 15,783, or 12 per cent, in rag receipts. Imports of other waste were 6,652 tons higher than in the preceding year, but this was insufficient to offset the decrease in rags, and aggregate receipts of waste for paper making show a decline of 5 per cent compared with 1936.

Total imports of paperbase stock were valued at \$117,852,607, of which amount \$98,269,113 represented wood pulp, \$12,393,457 pulpwood, \$4,475,402 rags and \$2,714,635 other stock.



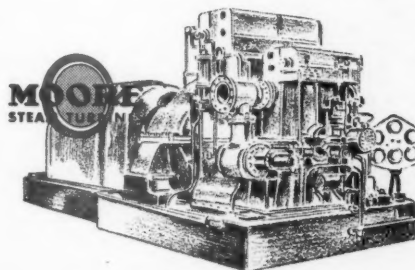
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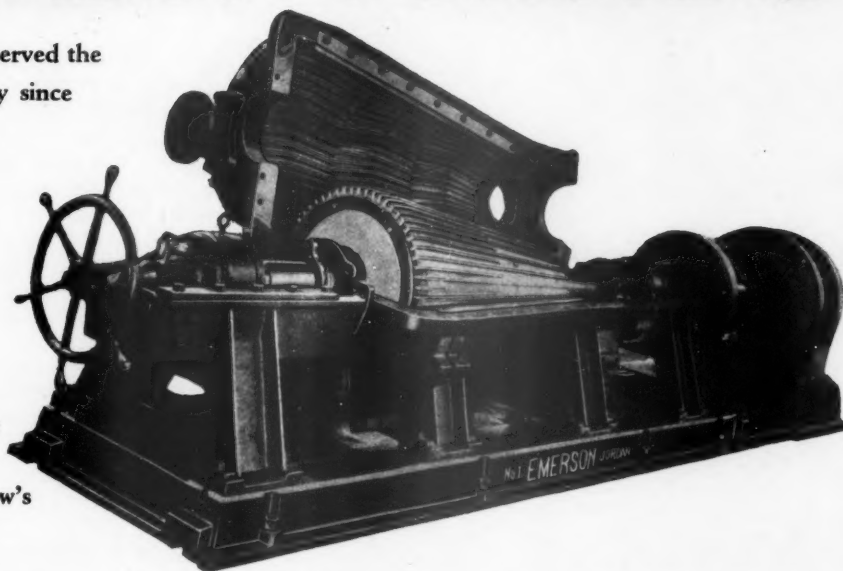
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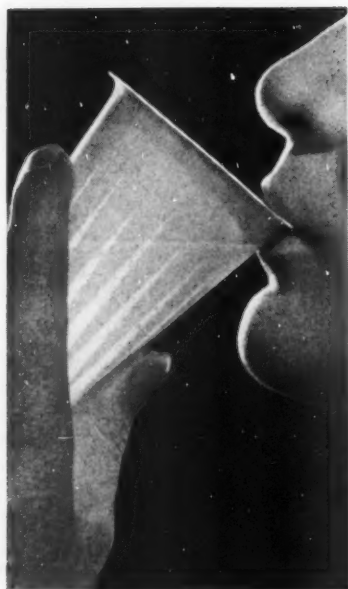
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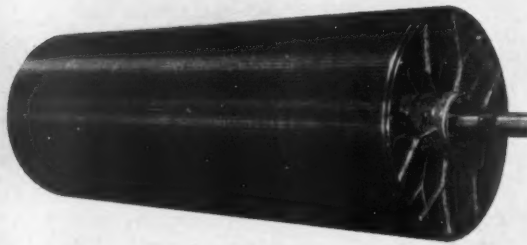
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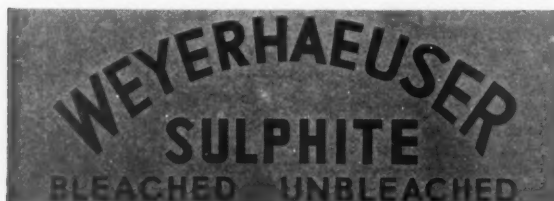
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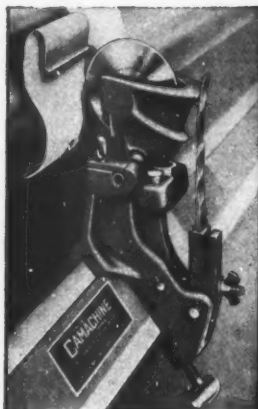


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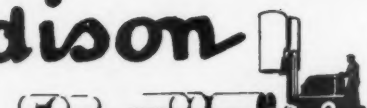
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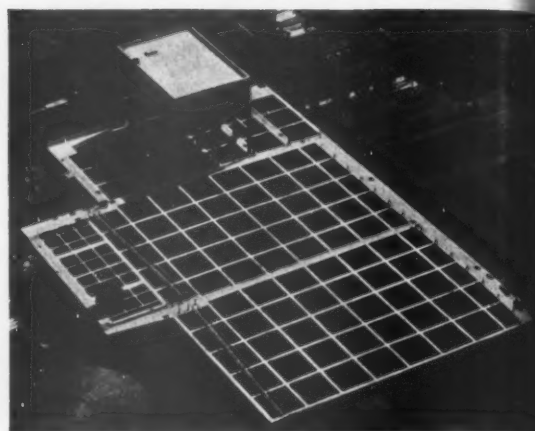


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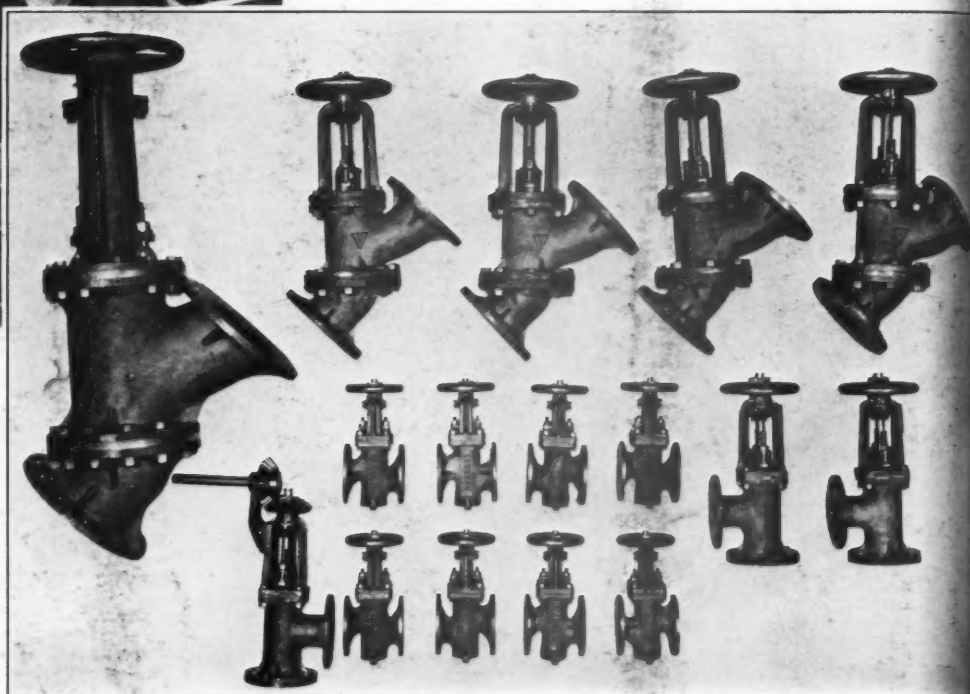
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